DOCUMENT RESUME

ED 084 996 HE 004 887

AUTHOR	Daly, Kenneth W.
TITLE	Planning the Interface Between Postsecondary Education and the City.
INSTITUTION	North Carolina Univ., Chapel Hill. Center for Urban and Regional Studies.
SPONS AGENCY	North Carolina State Commission on Higher Education Facilities, Raleigh.
PUB DATE	Aug 73
NOTE	90p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Cooperative Programs; *Higher Education; *Postsecondary Education; Program Development; *Program Planning; *School Community Programs; *School Community Relationship

ABSTRACT

This report provides an overall framework for planning the interface between institutions of postsecondary education and the city in or near which they are located. The main thrust of the report suggests: (1) The question of the interface between a postsecondary school and a city can only be answered by those who are "serious" about it; (2) Being "serious" means taking leadership to push for, or getting the existing leadership to adopt, a program, which respresents a certain conception of what the interface should be and how to achieve that state of affairs; (3) This political process of drawing up a program and realizing it is what planning is really about; (4) In order to plan, institutions must be changed so that planning the interface becomes part of the value-systems, the structures, and the normal routines of those institutions. A bibliography and appendices are included. Related document is HE 004 886. (Author/MJM)

FILMED FROM BEST AVAILABLE COPY

ED 084996

Planning the Interface Between Postsecondary Education and the City

by

Kenneth W. Daly

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 004 827

Center for Urban and Regional Studies
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

August 1973

ED 084996

PLANNING THE INTERFACE BETWEEN POSTSECONDARY EDUCATION AND THE CITY

by

Kenneth W. Daly

Research Associate

Center for Urban and Regional Studies
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

August, 1973

This report is part of a project financed by a grant from the North Carolina Commission on Higher Education Facilities, under Title I of the Higher Education Facilities Act of 1963. The views expressed herein are those of the author alone and do not represent the position of either the Commission or the Center. The author would like to thank Emil Malizia, Conrad Seipp, Charles Wheeler, and Walton Jones for their comments on an earlier draft of this report.

CONTENTS

	Page
I. The Interface Between Institutions of Postsecondary Education and a City (IPEC)	1
A. Introduction: Project Questions	1
B. Why Take an Institutional Approach?	4
C. Interorganizational Structure of Institutions	9
D. What is the IPEC?	13
E. Planning the IPEC	17
II. Institutionalizing Planning	21
A. Planning as Political Programming	21
B. Strategic Planning: Formulation of Program	23
C. Conditions for Institutionalized Planning	27
III. Planning Postsecondary Education for a Metropolitan Region	35
A. Why Allocate Resources at the Metropolitan Level?	35
B. Assets and Liabilities of Multicampus Systems	36
C. A Metropolitan Higher Education Council	38
D. Available Planning Tools for a MHEC	42
References	47
Appendix 1. Glossary of Institution Building Terms	50
Appendix 2. WICHE Inventory of Postsecondary Outputs	61
Appendix 3. WICHE Program Classification Structure	66
Appendix 4. ACE Self-Study Checklist	68
Appendix 5. Cincinnati Study Self-Study Outline	72
Appendix 6. Caffrey-Isaacs Economic Impact Model	75
Appendix 7. Economic Impact Study of Winston-Salem, N.C.	84

I. THE INTERFACE BETWEEN INSTITUTIONS OF POSTSECONDARY EDUCATION AND A CITY.

A. Introduction: Project Questions.

The stated purpose of this project is "to explore in some depth the present ways in which institutions of higher education are of assistance to the City of Winston-Salem and additional areas of service which might be undertaken." The grant proposal specified that this goal could be achieved to a degree by attempting to provide preliminary answers to the following questions:

(1) What can higher education contribute to an urban area like Winston-Salem in the resolution of pressing urban problems?

(2) What can higher education contribute to the City of Winston-Salem in particular to assist in the resolution of specific, identified urban problems which it faces?

(3) How can the resources of existing institutions of higher education be mobilized to contribute to meeting the needs identified above?

(4) What are the implications of the above for institutional enrollments, academic facilities requirements, and instructional equipment needs?

The answer to question (1) was sought through search and review of the literature on the role of institutions of higher education in the solution of urban problems. That report, Institutions of Higher Education and Urban Problems: a Bibliography and Review for Planners, has been published by the Council of Planning Librarians. Some basic materials for answering questions (2), (3), and (4) have been collected and published in the project report, "Community Program Planning in Postsecondary Education: A Source Book for Winston-Salem, N.C.," a monograph of the Center for Urban

and Regional Studies.

In the context of the project, the purpose of this report is to examine some of the theoretical and practical questions which arise when an institution of postsecondary education* attempts to answer all four questions for itself. Taken together these questions provide an intuitive notion of what is meant by the term "the interface between postsecondary education and the city," or IPEC. The notion of answering these questions offers a preliminary understanding of "planning." It is hoped that the content of this report will bridge the gap between such an immediate understanding of planning the interface and a fuller, deeper understanding which can be the basis for institutional practice.

Given the nature of this project as one outside the actual processes of planning postsecondary education, this report is an external examination of the aspects of planning the interface. In order for interface planning to be carried out in practice it is necessary that these aspects of planning become internal to an institution of postsecondary education, and for the understanding of planning presented in this report to become a self-understanding of the leadership° of postsecondary education.**

---

*Whereas the project proposal used the term "higher" education, this report will speak of "postsecondary" education to emphasize that its sphere of interest includes community colleges, technical institutes, and proprietary schools. For the most part, however, this report will not differentiate among the various sub-types of postsecondary education--whether distinguished as to control (public, private), type of certificate awarded (university, four-year college, two-year college, etc.), size or status. It will be assumed that the institutions under consideration are located in a metropolitan region, either in a central city on its suburbs, but the peculiar problems arising from location will not be treated specifically.

**Definitions of important terms used by "institution building" writers will be found in Appendix 1, a Glossary of Institution Building Terms. In this report all terms used with these definitions in mind will be marked (°).

This report is addressed, then, to this leadership[o] (actual and potential)--to those in postsecondary education who are interested in the impact of their institution on their city and/or who have to cope with the increased demands placed by urban peoples and other urban institutions on postsecondary education. Everything that is said in this report presupposes that there exist among its readers persons who are serious about these impacts and these demands, that some of its readers are committed to moving their institutions to answer the four questions posed by our project. Of all the assumptions to be made in this report this is perhaps the most crucial--and the least tenable.

One impression gained from our review of the literature on the interface is that, despite the lofty rhetoric, many people in postsecondary education have not been serious about their impact on the city or about their response to urban demands. Attempts to preserve business as usual, to keep the organization going through its normal routines and to minimize external interference, or what social science jargon calls "boundary maintenance" is not serious. Seriousness about the interface implies change, not "marginal deviations from previous practices, or ... incremental improvement in efficiency," but "qualitative changes in norms, in behaviour patterns, in individual and group relationships, new perceptions of goals as well as means." (Esman, 21) Such thorough-going changes will require new or reconstituted organizations which internalize such changes in their structure and processes, protect them, actively work for their acceptance by society at large. This understanding of seriousness about institutional change has been termed "institution building" by some writers. (Eaton) This report adopts the notion of "institution building"

as a convenient summary of the tasks facing those readers who are serious about the interface between postsecondary education and the city.

B. Why take an institutional approach?

As noted above, this report assumes that a certain degree of seriousness exists about planning the interface between postsecondary education and the city. At the same time it is hoped that this report can serve as a means to stimulate the emergence of such a serious leadership in post-secondary education. This assumption and this hope are necessitated by the problem of "circularity" which is inherent in human activity. They also indicate the manner in which this report will deal with "circularity"--an approach to be called institutional and contrasted with linear and technological approaches.

On the personal level Hegel notes that there are three moments of action: purpose, means, and the realized object. Exploring the relations of these three moments he observes, "The individual ... who is going to act seems to find himself in a circle, where each moment already presupposes the others, and hence seems unable to find a beginning ..." (Hegel, 422) The same problem arises in social action. If social formations are viewed as systems of mutually interacting parts, and society as a system of interacting social formations, one might describe the way in which people carry out their social affairs as a process of "cumulative and mutual causation." (Myrdal) The question confronting any group seeking to achieve some purpose, say, to change an organization or to build a new institution, is that of where to begin. Starting the process at one point in a system of "cumulative and mutual causation" often requires a certain state of affairs in other parts of the system, which in turn presuppose conditions in still other

parts, which again often lead in the end to requiring the very conditions which one set out to create. For instance, a purpose (like the institutionalization of planning) often requires certain means to achieve it (a leadership committed to planning) which themselves can only be found in a state of affairs where the object has to some extent been realized (an institution which values planning).

The observer of human action sees these three moments of the action; the actor confronts their dynamic interaction in the problem of circularity. One aspect of these moments of action is timing which has three aspects itself: simultaneity, sequence, and rate. (Moore) Some people try to deal with the problem of circularity by concentrating on the aspect of timing. In particular they define the problem away by putting it in a linear framework--step one, step two, ..., step n, final result. A linear interpretation of the task of institutionalizing interface planning might say: first, institutionalize planning within one's institution of postsecondary education; second, institutionalize the interface between that institution and the city in which it is located or with which it wants to relate; third, institutionalize the interorganizational planning that must be done with other postsecondary and urban institutions involved with the same city. Not only does a linear approach focus on a secondary aspect of the problem (timing), it understands timing in a mechanical way, i.e., it does not understand human time. An institutional approach to social action, on the other hand, brings the basic problem of circularity to the fore. It recognizes the dilemmas of acting within and upon a system of "cumulative and mutual causation" where social formations move at uneven rates, combine different sequences, and often embody the results of previous

historical developments. Institutions must be understood as history acting in the present.

Another, more widespread, approach is to focus on the technical problems involved in the task at hand and to dismiss the question of institutional changes as infeasible. This approach is characteristic of the dominant schools of social science and will be termed here as the technological approach. Like the linear approach the technological approach is partial in that it concentrates on one moment of action: the means. Because it is partial it in the same way does not understand even the part of the total system it limits itself to. The particular tools of, say, planning (e.g., budgeting, or forecasting) not only presume a certain institutional framework, their use over time changes the framework. The technological approach assumes that this institutional framework does not matter, that "practical," "hard-nosed" administrators don't need to get bogged down in "philosophical" questions. The institutional aspect of any instrument of social action is assumed away by presupposing that it will remain constant (ceteris paribus, as the economist say), or that it will adapt automatically to any changes caused by the employment of different techniques (mutatis mutandis), or that a single variable can readily be used to describe the dynamics of a whole complex of factors, or that any number of factors can be lumped together into a catchall category, or that "certain sequences can be isolated and analyzed without regard to their relationship to other sequences." (Myrdal, 1946)

A technological approach to the interface between postsecondary education and the city (IPEC) would search for a method to measure the impact that an institution of postsecondary education has upon a city. The

methodological details of constructing such a measure are complex, and important. If this report had attempted to produce such a method of measurement, it would have stepped right into the mainstream of planning postsecondary education.

In their study of University-Community Tension Robert Carroll and his colleagues found that architects and planners (both urban and campus) more frequently concentrated on the physical aspects of the interface between postsecondary education and the city. The results of their survey "repeatedly suggest, however, that 'people-related' factors rather than purely physical ones are more significant." (Carroll, 23) Likewise, Lee and Bowen in their analysis of multicampus universities observed that

> ... many academic planners appear reluctant to recognize that their work is not a substitute for the political process but a critical part of it, that the academic plan is not an end result but a step in a continuing, fluid stream of decisions. The university cannot itself resolve all the conflicts inherent in an institution with competing goals, but it can greatly improve the quality of the evidence upon which the state's political arms will make their decision. (Lee and Bowen, 233)

These studies make an important point, one which those interested in planning the interface between postsecondary education and the city must grasp. That point is: The basic impediment in the way of planning the IPEC is not the lack of a sophisticated technology, though the theories and methods of planning postsecondary education in the United States are still in the developmental stages. Rather, it may safely be asserted the task confronting those who wish to mobilize institutions of postsecondary education to contribute to the solution of urban problems and to plan that mobilization is a political task. The very definition of these problems is equally a political project.

An institutional approach is, therefore, political as well as total and dynamic. The answer to question posed at the head of this section (why take an institutional approach?) is that the alternatives are misleading, superficial, and opportunistic. No institution, least of all postsecondary education, is apolitical. Views which deny or assume away politics in postseconadary education hide, intentionally or not, the interests of certain groups and help maintain their dominance. In this sense the technological approach is opportunistic. It is also false. Gross and Grambsch, in an extensive study of the perceived and preferred goals of university faculty and administrators, observed that there are fundamentally conflicting interests inherent in the university as an institution. The locus of political struggle is not, they found, the conflict between faculty and administration as is usually supposed. Rather the principal contradiction in the university is that between "outsiders" and academicians. This contradiction is expressed in two opposed programs° for the university, elitist and service. (Gross and Grambsch, 97, 114-115)

> ... (T)here is a clear distinction between 'elitist' goals and 'service' goals. Elitist goals reflect an 'ivory tower' orientation: a concern with scholarly and intellectual values at the expense of more practical considerations, with faculty interests, and with prestige and excellence. 'Service' goals, on the other hand, are related to a concern with developing other capacities and skills in the student besides just his intellect, with providing direct service to the surrounding community, with satisfying outside constituencies, and with the good of the institution. (Gross and Grambsch, 40 fn.).

The next section will outline the basis for a better understanding of the contradiction between "outsiders" and academicians. In closing this section let us just state that an institutional approach has been taken because it is the only one which explicitly recognizes the problem of circularity,

understands it as political, and presents the concept of a political program° as a realistic, viable way to deal with it. This last point will be further explained in Section II.A., "Planning as Political Programming."

C. Interorganizational structure of institutions.

We have already spoken of society as a system of social formations. There are three basic types of social formation relevant to this report. "An institution is usually an intricate and complex social and economic formation," such as a corporation, a government department, or a college. As such it is a sub-system of the total social system. (Kornai, 37, 89) It should be noted that this definition is somewhat different from the most common social science definition of institution which comes from Talcott Parsons. According to him, institutions are "generalized patterns of norms which define categories of prescribed, permitted and prohibited behavior in social relationships, for people in interaction with each other as members of their society and its various subsystems and groups." (quoted in Siffin, 45) Parsons is looking at the rules governing the behavior of members of social formations while Kornai points to the formations in their totality. Yet, Parsons does add the important notion of legitimacy° to Kornai's intricacy and complexity as characteristics of an institution.

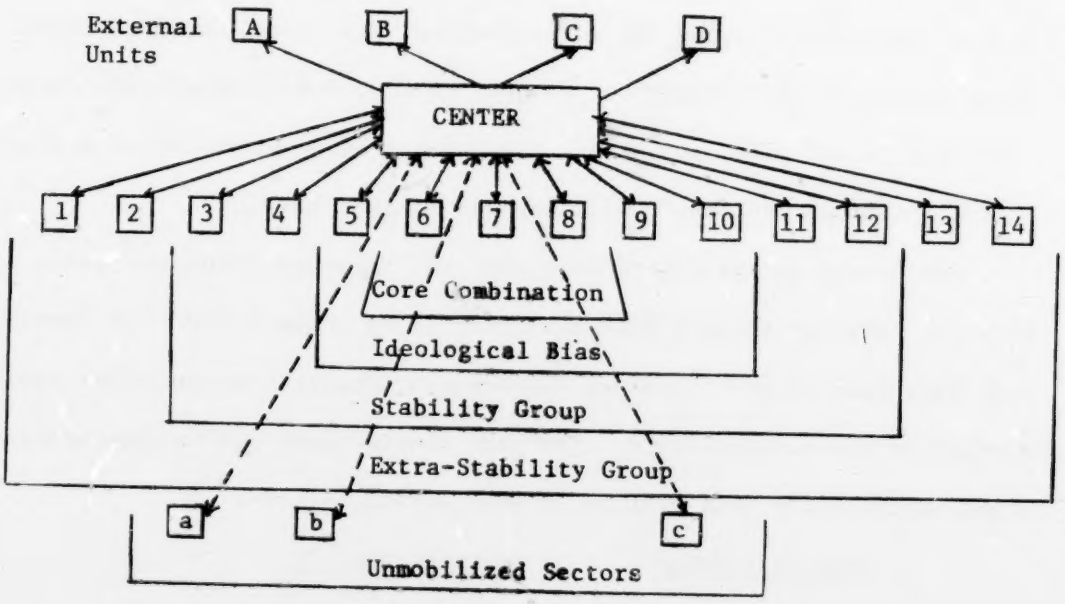
An institution is made up of organizations. "An organization is a social formation consisting of persons who associate in order to perform some definite social-economic functions." (Kornai, 37) An organization is, in turn, composed of units. "A unit is a nondivisible element of the economics system which behaves with definite regularity and responds to

outside stimuli in a regular manner." (Kornai, 38) To repeat, this report sees institutions as interorganizations whose component organizations perform definite social-economic functions. The performance of these functions is understood here as a political issue and the response of units to stimuli as a political question. In Kornai's view units are hypothetical social formations, merely convenient abstractions. In this report units will be treated as actually existing social formations in some cases. This is made possible because Kornai's "unit" is here equated with what Ilchman and Uphoff call a "sector," "a group of persons who respond to political issues in a similar fashion ." (Ilchman and Uphoff, 39) When units are "formally organized with acknowledged leadership," they are real social formations because they are acting politically for themselves. (Ilchman and Uphoff, 39)

Units differ with respect to the basis of their common interests, their degree of organization, their resource° position relative to other units, and the composition of their resources.° (Cf. Ilchman and Uphoff's table summarizing the interorganizational aspects of resources° reproduced in Appendix 1.) The most important aspect of the concept of units for understanding the interorganizational structure of institutions is that of unit stratification. The figure (on the following page) is adapted from Ilchman and Uphoff's Figure One (43) as a means of explaining unit stratification in an organization.

The center of an organization performs the same role as the regime in a state, and like a regime it may lead or it may dominate the units. The core combination is that group of units which have the most influence on the personnel° and program° of the center. The ideological bias is composed of those units "whose present and future relationships with the (center) are

Figure One. Unit Stratification in an Organization.



included in the core combination's conception of the good (institution)." Units in the ideological bias provide little political capital to the center and hold few major positions in the organization. Those units which generally acquiesce to the rule of the center and those units "whose disaffection could disrupt the stability of the (center)" constitute the stability group. The latter units are usually not favored by the center, and their members usually hold positions of opposition (which are more often informal in an organization). Since these units are in the position to withhold resources from the center, the center-unit interaction is often one of bargaining. To meet the demands of units in the extra-stability group in an organization would require a fundamental change in the center. Therefore, the usual response of the center to these units is to threaten and/or coerce. In postsecondary education most unionized nonacademic employees are in the extra-stability group. An unmobilized unit is a

category of persons who are largely unpoliticized but who can be considered in sectoral terms because of their potential productive characteristics. Public issues that engage the (organization) have hardly touched them. Their resources are usually too meager, or the cost of mobilizing their resources is too high, to warrant the expense of involving these sectors in the political process." (Ilchman and Uphoff, 43-45)

The arrows in the figure represent the important linkages° which are paths of cumulative and mutual causation in an organization. In Appendix 1 four different kinds of linkage° between an organization and other social formations are distinguished. The same distinctions can be made within an organization using this diagram of unit stratification.

Type of Linkage	Center Linked to
Enabling (+)	Core Combination
Normative (+)	Core Combination, Ideological Bias
Functional (+)	Core Combination, Ideological Bias, Stability Group
All 3 above (-)	Extra-stability Group
Diffuse	Individual members of units

When the "units" of the social formation are themselves organizations composed of basic units, then the figure above also represents the stratification of an interorganization. Linkages differentiate "simple" from "complex" interorganizations. A simple interorganization is characterized by the presence of a few linkages which do not vary much in kind nor change very much over time. Complex interorganizations have quantitatively and qualitatively more linkages which tend to change over time, often rapidly. The contrast between "simple" and "complex" interorganizations is relative, but it also gives rise to a concept which is

quite useful when one wants to create an interorganization, to build an institution--intermediate organizations. The movement from a collection of isolated organizations or from one form of interorganization to another requires "... intermediate institutional forms /to/ 'mediate' the stresses and strains of transfers and exchanges ..." (Landau, 99)

B. What is the IPEC?

For the purposes of this report the interface between an institution of postsecondary education and a city is defined as the total system of linkages° between that institution and the social system of that place. These linkages° are of four types:

enabling--with institutions of authority,

functional--with suppliers and acceptors of resources°,

normative--with institutions which embody the value-systems of city residents, and

diffuse--with individuals and groups separate from their membership in institutions.

This total system of linkages° is a system of "cumulative and mutual causation" and it is internalized by the postsecondary institution in attributes described by the institution building variables: leadership°, doctrine°, program°, internal structure°, and resources°. The stocks and flows of these resources (particularly, the exchanges of goods, labor-time, information, status, force, authority, and legitimacy) within the overall system constitute the most readily observable phenomena in the system. Insofar as these flows constitute messages, i.e., are signs by which one social formation or individual affects the behavior of another, they must be appropriately coded°. The set of rules by which a set of signs is made

intelligible throughout the system is known as a code°.

In their report, The Campus and the City, the Carnegie Commission presents a close approximation to this definition.

> ...[T]he relationship between the 'city and the campus' is not a single relationship between two clearly identified entities but rather a whole series of relationships with the identity of the participants shifting somewhat from one relationship to another, and from time to time. (Carnegie, 17)

They list seven ways in which an institution of postsecondary education relates to a city:

(1) processing urban students;

(2) training people for new occupations needed for urban life;

(3) seeking out and disseminating an understanding of urban life;

(4) research on urban problems;

(5) contributing to public services;

(6) as a neighbor;

(7) as an employer. (Carnegie, 5)

Each of the four kinds of linkage° are involved to some degree in each of these relations. The dominant linkage° associated with relation (1) is functional° in the sense that postsecondary education acts as an intermediary between families, who supply the students, and the labor market, which receives its graduates. This relation can also be seen as involving diffuse linkages° with a number of individuals, students. In order for the dominant functional linkage° to exist it is necessary that postsecondary education have enabling linkages° (e.g., a state charter, local politicians and businessmen serving on the board) and normative linkages° (with institutions that will instill in students the value of attending postsecondary education and with institutions whose value-systems postsecondary educa-

tion instills in students). The Carnegie Commission's second relation is really just an aspect of the first. Given the Commission's implicit doctrine° of the importance of "professionals", it assumes sufficient importance to be separable.

Relation (3) is primarily normative° in the sense that the postsecondary institution acts to change the values and perceptions of urban people concerning their own situation. This relation requires enabling linkages° to give the institution legitimacy°. Since the relation also involves interactions with individuals, it contains a number of diffuse linkages°. Without basic functional relations° with students and the city's populations, this relation would not arise. Since research on urban problems, relation (3), is carried out by individual faculty members or groups of them, it requires a number of internal functional linkages°. The work of research also brings the researchers into functional linkages° with a number of urban institutions and individuals. Some of these linkages can be classified as diffuse°. Enabling linkages° are essential to gaining and keeping the capacity to carry out this research and to having its results heeded. Only those who believe in the myth of "value-free" research would deny that this relation also involves normative linkages°. From an institutional point of view such as Myrdal's, these normative linkages° predominate. The fifth relation with the city, the provision of public services, is basically a functional linkage°. It also contains diffuse linkages° with the individual clients served. Much of the literature on the IPEC consists in attempts to resolve the problems raised by this relation between it and enabling linkages° with other institutions which provide similar services, as well as between it and normative linkages° with institutions (primarily other postsecondary institutions

and groups of postsecondary educators) whose doctrine° does not value, or even opposes, the provision of public service by institutions of postsecondary education. Lest the previous definitions of linkages° and the IPEC seem to have implied otherwise, it should be emphasized that linkages° can be <u>both</u> positive and negative.

Relation (6), the institution's role as neighbor, expresses all four linkages° as they arise from the geographical location of the institution. Relation (7), the institution as employer, is dominantly functional°, but it presupposes a number of enabling, normative, and diffuse linkages°.

This discussion of the Carnegie Commission's seven IPEC relations has been carried out as a vehicle for describing the different linkages in the IPEC system. For a more systematic notion of the different possible interface systems we will refer back to Figure One in the preceding section. Using the Figure one can describe what Gross and Grambsch observed as the main political contradiction in postsecondary education, that of "academics" vs. "outsiders." What this means is that faculty and administrators ("academics") occupy the center and core in postsecondary education together. Their relation is not that of center and extra-stability group. Non-academics are the extra-stability group.

Accepting for the moment this interpretation of Gross and Grambsch and the validity of their finding, one can distinguish different types of interface system according to the location of other urban units to the academic center and core.

Type 1. Urban units are restricted to the external, unmobilized, and extra-stability groups.

Type 2. Some units are included in the stability group.

Type 3. Some units are included in the ideological bias, and more in the stability group.

Type 4. Some units have entered the core, and even more now are found in the ideological bias and stability group.

It should be emphasized that these are not a series of steps towards some ideal interface. Rather these types are meant to provide a preliminary notion of some situations which may exist when one sets out to plan the impact of postsecondary education on a city.

E. Planning the IPEC.

From the point of view of people in postsecondary education, the immediate meaning of planning the interface between postsecondary education and the city (IPEC) is the coordination of decisions and the implementation of decisions in order to move the total system in the direction specified by the doctrine° of their leadership°. The question which faces the leadership of an institution of postsecondary education is: what changes should be made in the institution which will facilitate systematic consideration of what the leadership° and its core combination want for the institution and of how much different states of affairs in the institution's system of linkages° contribute to or subtract from these goals?

Some observers, such as Ernest Palola, have charged that postsecondary education in the U.S. has not spent enough time examining the basic issues and constructing such goal sets. He describes the situation as one of "goal evasion." Lee and Bowen think that this description is "too narrow," at least with respect to multicampus universities. "What is wrong with system plans is not the absence of qualitative goals, but their overabundance and the apparent impossibility of rational choice among them ...

'Goal inundation' rather than 'goal evasion' more accurately describes system planning problems." (Lee and Bowen, 227) Our review of the literature on the IPEC indicates that the problem there is also one of "goal inundation." In the late 60's especially, postsecondary leadership was deluged with books, articles, speeches, and reports telling it what it should be doing about the city, in addition to the immediate demands of some of its students and faculty and a number of community groups. The first report of this project tried to bring some order to this mass of writing (Daly, 1973) Shortly after it was written the Carnegie Commission published The Campus and the City which provides postsecondary leadership with even more convenient (though less sharp) tools to cut its way through the mass of goals.

Actions aimed at changing the current situation in American cities, according to the Carnegie Commission, must focus on:

(1) government and tax structures,

(2) delivery of health services,

(3) social technologies for high density living,

(4) employment levels,

(5) inflation control,

(6) economic growth.

"While universities may serve as focal points, solutions to the complex problems of our metropolitan area lie beyond the power of universities to provide." (Carnegie, 11) In other words, the Commission does not contend that postsecondary education or any other "single set of institutions" acting alone can significantly affect the situation in our urban society. The Commission assumes that the problems faced by the cities are

national. While this report agrees with this assumption, the question before us is: What can a particular institution of postsecondary education do, singly and in cooperation with other postsecondary institutions, to change its city in accord with its preferences (doctrine°)?

At this level one does not have to get involved, as the Commission and so many other writers on the IPEC do, in asserting or proving the responsibility of the postsecondary education to the city. Discussions which start at the national scale of urban problems and with the responsibility of postsecondary education to solve these problems have led not only up a number of blind alleys (e.g., "accountability" vs. "academic freedom") but also to the many bloated claims of the ability of postsecondary education to solve urban problems. Even the Carnegie Commission falls into the first trap at times.

> One principle, however, is clear: the campus for 100 years and more has served agriculture, industry, and the professions, and it cannot now deny service to the new claimants; it should not now or ever base its actions on class bias; it should not now or ever serve only the rich and powerful, and deny the poor and the weak. The rules it follows should be the same for all. These rules are difficult both to set forth and to apply. (Carnegie, 3)

While the author of this report fully agrees with the normative principle stated by the Commission, it must be noted that the difficulty of setting out and applying rules of action arises precisely from stating the principle on this level.

The flaw in proceeding from the national "urban crisis" in the formulation of local doctrine can be seen in the range of options the Commission sets out for particular institutions.

> A few campuses may still be able and still want to isolate themselves from urban affairs; a few more will be able and will want to protect themselves, even though they are not

> fully isolated, from the pressures of urban problems. But most will either (a) expand their interests to include attention to the new urban problems consistent with their prior commitment to disciplinary teaching and research or (b) make an all-out commitment to their urban locality specifically and to the problems of the urban setting more generally as their preeminent purpose. Most institutions we believe will come under (a), but an increasing number will also come under (b). (Carnegie, 5)

Any institution which began the process of institutionalizing the IPEC by trying to decide whether it wanted to choose isolation, protection, expansion of its "conceit" to dignify urban involvement, or "all-out commitment" would end up repeating the sterile debates of the 60's. If any action emerged, it would probably be like the programs of that period--disjointed and unproductive for either the institution or the city. While these four options are undoubtedly real, the institution needs an approach which is more sensitive to the realities of its situation.

The most crucial reality is the presence of a serious leadership°, which is precisely what cannot be taken for granted in analyzing the discussions of the 60's. The rhetoric of the national "urban crisis" gives analyses of the IPEC a veneer of seriousness without the substance.

The substance of seriousness is a political program° and a leadership° is serious only if it has a program°. This claim was implicit in the definition of IPEC planning stated at the beginning of this section. In the next section it will be explained further as the basis for a deeper understanding of planning. This understanding will then be used as a contribution to the self-understanding of those who are serious about institutionalizing planning in postsecondary education.

II. INSTITUTIONALIZING PLANNING.

A. Planning as Political Programming.

The overall capacity of an institution of postsecondary education to plan its activities is essential if the interface of that institution with a city is not to be just a scattering of disconnected "programs" and public relations efforts. " ... [P]lanning [is] the ingredient that is necessary to bring about a relationship between the university and its community." (Nash, "Miscellaneous Comments...," 26) As Lee and Bowen and the Cincinnati study cited above point out, there is a strong tendency to see this capacity as a technical one. That this tendency is widespread in postsecondary education planning can be seen further in the survey studies of the field. (Casasco, Shoemaker, and Weathersby) Taken to an extreme this tendancy could divert the IPEC planner entirely into working out the details of the various planning models which are being developed.

This tendency to technologism is a manifestation of a certain conception of the purpose of planning: the production of an "ideal plan" which takes "all relevant facts into consideration." (Myrdal, 1879) An "ideal plan" requires fairly comprehensive knowledge of the relevant aspects of the social system and their causal relations with each other and with other factors. It also requires "a set of value premises for planning, sufficiently specific to solve the problem of optimization," or as it is often called, an objective function. Given these two conditions, this school holds that policies can then be chosen. This concept of planning faces a number of problems. Not only is it impossible to meet to any significant extent the knowledge requirement it proposes, the process of planning changes the situation which is supposed to be fixed in the planner's set of known

factors. Basically the conception of the "ideal plan" fails to deal with the problem of circularity. "[T]o postulate an 'optimal' plan in which an 'objective' set of functional relationships is confronted with an independent set of abstract objectives, and to proceed on the maxim 'give me your ends and I'll churn out the means' is itself irrational ... the illusion of 'optimal' planning in which unadulterated teleology confronts purely objective causality." (Myrdal, 1879-1881)

This notion of planning is incompatible with an institutional approach to the IPEC. This approach requires an understanding (really a self-understanding of the institution builder) that "a plan is fundamentally a political program ... the coordination of policies in order to attain or speed up ... the movement of the whole social system upward ..." (Myrdal, 1881, 1864, 1868) This plan is produced in terms of the actual valuations of those who are responsible for the plan. It is their concrete goals against which upward or downward movement is assessed -- not speculative, a priori welfare economics nor "postulated absolute ethical norms." Given this view, it follows that the valuations actually held by many in the IPEC are obstacles to planning, in the same category with the factors more commonly considered as obstacles, e.g., lack of natural resources. "These obstacles are revealed by the study of conditions and their interrelationships. They are part of what the institution must want to change by planning. For the assumption of all planning is that there is [a leadership°] bent on ... changing the valuations" in the social system or the part of it being planned. (Myrdal, 1881)

This understanding of planning has practical implications for the IPEC. It resolves the "wants" versus "needs " dilemma discussed in our

previous report. (Daly, 78-79) There it was noted that the term "needs" usually serves the political purpose of providing the leadership° with a facade of objectivity for telling people what is good for them. The institutional approach to planning removes this facade. In so doing it helps the leadership avoid entanglement in what the Carnegie Commission describes as "a chameleon-like concept," the "needs of the city," which means many things to many people. For urban peoples an institutional outlook makes it very difficult to hide the crucial questions expressed by the Carnegie Commission:

> ... [T]hose seeking to translate the institution's commitment into action must decide, for their purposes, who determines the needs and the priorities among them. Who, also, speaks for the city? Are expressed <u>wants</u> of groups within the cities the same as <u>needs</u>? And should the same voices within the city be equally important for the guidance of all types of institutions--for the research university as well as the community college, for the private and public colleges alike? (Carnegie, 16-17) (emphasis in original)

In effect the institutional approach holds that there are no needs unmediated by human wants. Therefore, a task of institutionalizing planning in postsecondary education and in the interface between postsecondary education and the city quite explicitly involves answering the questions: whose valuations inform the plan? Whose program prevails?

B. <u>Strategic Planning: Formulation of the Program</u>.

> Strategic planning is the process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use, and disposition of these resources. Strategic planning, as the term is used here, is a process having to do with the formulation of long-range, strategic plans and policies that determine or change the character or direction of the organization. (Anthony, 25)

Conrad Seipp and Malcolm McNair have developed a typology for categorizing different types of strategic planning. It is reproduced on the next page.

TYPOLOGY OF PLANNING ENDEAVORS

	Crystallized	Fluid	
$\overset{oo}{EM}$	Adjustment VC, RC, EC	Transitional signalizing a shift via breakdown of value or environmental certainty VC, RU, EC	The I-O as an aggregation of parts, with individualized behavior
$\overset{o}{EM}$	Problem solving via adaptation VC, RC, EU	Experimental VC, RU, EU	
$\overset{o}{EM}$	Allocation as group problem solving VU, RC, EC	Developmental VU, RU, EC	The I-O with a collective identity, the parts internalized
EM	Search as the scanning of what exists; opportunism VU, RC, EU	Innovative VU, RU, EU	

LEGEND

E : ends ; $\overset{o}{E}$: ends given

M : means ; $\overset{o}{M}$: means given

VC, VU : value certainty, value uncertainty

RC, RU : relations certainty, relations uncertainty

EC, EU : environmental certainty, environmental uncertainty

I-O : the interorganization

Under all of these categories there exists a "general iterative method of communication" between center and units for the formulation of the interorganization's program. It consists of three basic steps which are repeated (iterated) until the final program is chosen:

(1) the center sends out information to the units about the institutional program which contributes most to its set of valuations; Malinvaud calls this set of messages "prospective indices" which for him refer to alternative outputs, but here encompass the entire scope program;

(2) each unit uses this information to come up with a "proposal" of its own;

(3) on the basis of these proposals, the center sends back a revised institutional program.

This process continues until the center decides that enough information has been generated to make the final choice of an institutional program. Kumar's summary of Malinvaud's outline of this procedure lists the questions which have to be answered in coming up with this institutional program:

> i) What variables or functions of the variables constitute the prospective indices? What constitutes a unit's proposal?
> ii) What are the mechanisms by which the units generate their proposal?
> iii) How does the central planning agency generate, at each state, the prospective indices?
> iv) How does the central planning agency determine when to stop receiving additional information and how does it determine the final plan? (Kumar, 132)

Again we are faced with the circularity of institution building. In order to use the IB process to institutionalize the planning of the IPEC, one must have the criteria and a method for choosing what to institutionalize. Such strategic planning presupposes the existence of certain institutional characteristics, e.g., the organizational capacity to answer these

four questions. This capacity, too, might have to be institutionalized. It is not the intent of this report to set people off on endless chicken-egg searches which will never lead to any action by postsecondary education on the problems of the city. All these complications are brought out so that planners of the IPEC will be aware of the many facets of the institutions they are dealing with. The IB approach does not require taking an institution or organization apart and rebuilding it from the ground up. Rather the notion of institutionalizing means that one realizes that mobilizing institutions of postsecondary education cannot be accomplished by the application of technique. Not only does technology presuppose certain institutions, the application of technology changes those institutions. The planner of the IPEC has to be aware of the changing institutional fabric in which she/he operates and to look for tools which will give her/him a grasp on this fabric. IB does not mean unraveling the fabric and weaving a new one.

With that warning in mind, let us proceed to some of the criteria the strategic planner can use to pick a particular procedure for carrying out the general iterative method of communication briefly outlined above. Malinvaud describes the following properties of programming procedures which might also be applied to our strategic planning algorithm. If the methods used adequately determine the elements of the "prospective indices," the "proposals," and the final institutional program,[o] the algorithm is <u>well-defined</u>. In a <u>monotonic</u> procedure the center's valuation of the prospective institutional design at the end of one round is greater than (<u>strictly monotonic</u>), or at least not worse than, the valuation given to the result of the previous round. If a <u>convergent</u> procedure were kept going indefinitely, the center's valuation would

move closer and closer to the highest valuation it would give to any feasible* institutional program. A finite procedure reaches this valuation in a finite number of steps. Malinvaud also mentions the relative costs of different procedures and the speed with which they converge towards a final plan as possible criteria for choosing among them. (Malinvaud, 178)

Unfortunately there does not exist a set of fully developed alternative procedures for the IB strategic planner to pick and choose among. Additionally it is questionable whether one can predict the properties of any IB strategic planning algorithm in the same way that is done with mathematical programming models. While the methods of "experimental social innovation" (Fairweather) might be applicable to this and a number of other questions which arise logically and administratively prior to IB, there is little or no likelihood that they would improve on the answers which might emerge from moving straight into an IB process. Therefore, the institution builder will probably have to use the existing communications network as the basis for this strategic planning algorithm at the start, and use these criteria to guide the interpretation of the resulting experience gained.

C. Conditions for Institutionalized Planning

This section of the report will present an overview of the factors which determine if and how planning is incorporated into an institution of postsecondary education. Both the process and the product, the "planning of planning" and planning per se are learning processes

> ... in which intuition is transformed into hunches and hunches into knowledge, political pressures into technical considerations,

---

*The criterion for feasibility in IB is existing technologies rather than the existing institutions as in the common notion of feasibility. By definition IB seeks to change those institutions. (Nehnevajsa, 73)

> wholly independent into partly instrumental valuations, and in which the obstacles presented by social inertia and vested interests, the inhibitions of the planners and the area of genuine ignorance and uncertainty are gradually reduced. (Myrdal, 1896)

The institutionalization of planning requires the existence of four conditions:

(1) a political program[o];

(2) a dynamic interaction between scientific analysis and political programming;

(3) recognition of irrationality and an attempt to modify irrational beliefs and valuations, e.g., the "conceit" of the university, racism;

(4) recognition that broad, long-range decisions often have to be guided by vague intuitions, even as one tries to narrow down the domain of vagueness (a clear understanding of the limitations of the existing IB model). (Myrdal, 1894)

It is not being facetious to say that these four conditions also constitute planning. Once again we are confronted by circularity: planning requires planning. In order to intervene in the circle one needs to have a notion of possible alternative states of affairs in the system of interorganizational linkages: Conrad Seipp has developed a schema for classifying the different modes of coordination which arise from different interorganizational linkages. He uses two particular facets of the interorganization to map out different modes of coordination: "agreement" and "commitment". "Agreement" refers to the "concordance among all participants in a planning activity on both ends and means." "Commitment," is viewed as the incurring or the willingness to incur costs on the part of participants."

As noted above (I.C.) an interorganization can be viewed as a social

formation to be institutionalized. The different modes of coordination in Seipp's table, reproduced below, summarize alternative states of institutionality towards which an IB process might be directed, as well as alternative starting points.

Modes of Coordination

Degree of Agreement

high	cooperation	exchange	auto-coordination
medium	induction adduction	negotiation	arbitration
low	indifference	competition	conflict
	low	medium	high

Degree of Commitment

Indifference is characterized by the paucity or absence of agreement and commitment. Moves towards increasing or formalizing the interactions between postsecondary education and the city would undermine the continuation of this form.

"Competition is a more structured process explicitly or tacitly with rules of fair behavior among participants who share a medium commitment but a low level of agreement as to the group effort." In competition the participants can try to gain advantage over each other, but are not allowed to destroy each other, as they may attempt to do in a situation or conflict. While generally unstable, competition and conflict however, as forms of the interorganization of postsecondary schools, which last over time.

Induction-adduction represents probably one of the most common modes of interaction between postsecondary institutions and their cities. IPEC doctrine[o] is frequently present but not institutionalized to any great

extent, a situation often traceable to the "goal inundation" mentioned above. And the commitment of postsecondary institutions to the IPEC is most often quite low. Seipp's description of induction-adduction fits many actual interfaces in this country. It "reflects the concerting of actions in largely an opportunistic situation ... It is a process which centers upon emulation or imitation of others; whatever search is involved is directed to the discovery of what can be done with advantages to the participants without too much investment on their part". Induction-adduction "is essentially formless, and applies, to a larger degree, to an area of shared concern where commonalities among organizations are more intrinsic to individual opportunities than to a shared concern." Cooperation, as a variant of the IPEC, describes processes which emerge from linkages° "which are basically voluntary and involve matters which are only of peripheral concern to the specific interests of the participants." Thus, while the normative linkages° and IPEC doctrine° are developed enough to lead to the creation of some structure for cooperation, the enabling linkages° are still weak, "peripheral." In negotiation the areas of interest of the participants are more clearly defined in the doctrine. The transactions among them are thus more conscious and "contractual" than in induction-adduction and competition, which are somewhat more "automatic". Specifically, doctrine° has reached a level of development to allow for the definition of "fungible goods."* In exchange the increased level of support° combined with a developed IPEC

---

*A thing is not fungible when "that very individual thing, and not another thing of the same or another class, in lieu of it, must be delivered." It is fungible when "the delivery of any object which answers to the generic description will satisfy the terms of the obligation." (Black's Law Dictionary, quoting from the Australian Jurist)

doctrine° leads to a clearer sense of the "collective concerns" embodied in the linkages°. This sense of agreement about overall interests transcending those of the individual units tends to push them beyond "fungibility," to a mode of interaction "often without recognition of the trades made ... or of the differentials of value to the participants of the items of the trade. As a result, structure, although not as contractual as negotiation, is greater than that of cooperation and much more stable." Arbitration occurs when the units have such a high level of support° for each other that they are willing to let some outside or overall part intervene to formulate "some contract of settlement or resolution" of the differences that remain. Arbitration is very highly structured. "Auto-coordination, like the other corner cells of the table, is a limiting case," not likely to occur in an actual IPEC. In auto-coordination a highly developed IPEC doctrine° has been internalized in all of the units, all of whom also have a high level of support for each other and for the overall system. "... [R]esponses of the participants are expected to accomodate reflexively to the others because of a shared agreement and commitment concerning the ends of the collective as an entity."

The interorganizational code° in auto-coordination has become perfectly paired. In fact as one moves diagonally across the table from lower left to upper right the interorganizational code° becomes progressively better so that the linkages become more ordered, less stochastic.

This table should be examined primarily for what it says about interorganizational linkages°. The horizontal dimension, "degree of commitment," indicates the relative strength of the enabling linkages between the center (postsecondary education) and external units (the city). The degree to which external "organizations and social groups ... control the allocation

of authority and resources needed by the institution to function, "i.e., the enabling linkages°, will strongly influence the willingness of that institution to incur costs to maintain and improve its linkages with those social formations (Esman, 23). On the vertical dimension, the extent to which external organizations and social groups "incorporate norms and values (positive or negative) which are relevant to the doctrine and program of the institution," i.e., its normalise linkages° will be expressed in the "degree of agreement" between the institution and these social formations, in the relative development of a common doctrine° (Esman, 23). The interaction between these two dimensions, between enabling and normative linkages°, determines to a large degree the "modes of coordination," which make up the cells of the table. These modes, in turn, structure the networks of resource exchanges between postsecondary education and the city, i.e., the functional linkages in the system: Thus, along the lower left-upper right diagonal, the centrality of the functional linkages° to the units increases.

Since Seipp's schema is based on the assumption of equality among the units of the interorganization, its cells require further elaboration to take account of unit stratification. But that theoretical refinement is outside the scope of this report. It suffices here as a preliminary means to intervene in the circle of conditions one must have in order to institutionalize planning. The two dimensions of the table, agreement and commitment, normative and enabling linkages, relate Myrdal's four conditions to the interorganizational structure of institutions. This relation can be seen by examining the same two dimensions as they appear in Beresford Hayward's list of conditions for implemented plans: "role in the overall strategy" and "readiness". Within an institution of

postsecondary education the acceptance of planning depends to a great degree on the level of political "readiness" for solutions to the institution's problems which entail changing that institution. This "readiness" manifests itself in the level of political commitment to the solution of these problems and is embodied in the orientation towards change in the organization's structure° and leadership°. It is, then, "the first determinant of whether ... plans will be implemented." (Hayward,88) And in the institutionalization of planning it is very important that the first planning efforts be implemented. Since so many "plans" end up gathering dust in the files of the leadership°, planners often seek consolation in improving their techniques in the hopes that someday the leadership° will see that they really have something. What they are actually doing is feeding a vicious cycle that makes planning more and more marginal to the actual functioning of the institution. An important strategic concept of the institutional approach is that vicious cycles can be reversed, and Hayward offers some practical suggestions for initating a beneficial cycle, i.e., one leading to the institutionalization of planning.

There are two tactics open to planners in the face of a given state of political readiness. On the one hand, the emphasis, timing, and style of the plan can be tailored to fit this level, and content of the plan can be kept within the limits imposed by this level. Using this tactic the planner aims to make the plan approporiate to the existing doctrine° of the organization. In contributing to the substantive purposes° of the organization the plan may also modify the doctrine° to increase the valuation attributed to planning. This modified doctrine° presents the planner with a new, hopefully more supportive, environment for the next round of planning. On the other hand, the planner may use the tactic of formulating

a plan which does not fit the level of political readiness but which is "one of the tools to change these circumstances." (Hayward, 89) Such a plan may "show what could be done if feasible political decision were ever made." Or it could actually constitute the programmatic translation of the doctrine° of a group outside the core or bias which is contending for leadership°. Planners usually shy away from such directly political use of planning, at least in the United States. They often criticize such politically inappropriate plans as infeasible. The irony is that they themselves continue to produce plans which are not implemented nor implementible because they continue to accept as a constraint institutional doctrire° which does not value planning. In this situation an "inappropriate" plan can actually be much more politically feasible.

The second basic condition for an implemented plan concerns the role of the institution or sector of society in the larger strategy for social change. In the area under consideration in this report, this condition refers to the need for the policies and the priorities of the leadership° of the city to be so clear that the role of postsecondary education can be defined by that leadership°. More generally within postsecondary education this condition requires that postsecondary leadership° have a clear understanding of the goals of society with respect to postsecondary education. In particular fulfillment of this condition presupposes a careful analysis of those who have a vested interest in the status quo in the city. More generally, planners must examine the social structure of the city: the actual inter-relations, positions, and outlook of urban classes, including their size, relative strengths, and geographical distribution. "Such analysis would, on the one hand, be a tool for political implementation of ... plans, and on the other would

delineate the real tasks for [postsecondary education] in these plans." (Hayward, 92)

III. PLANNING POSTSECONDARY EDUCATION FOR A METROPOLITAN REGION.

A. Why Allocate Resources at the Metropolitan Level?

If the IPEC is to take on an interorganizational form such as cooperation, exchange, negotiation, auto-coordination, or arbitration, it will involve the allocation of the resources of postsecondary education within an urban area within a state. As explained above, the comprehensiveness and mode of the planning process will be somewhat different in each type of IPEC interorganization, but even a minimal interorganization will have to be justified--in terms of its contribution to statewide planning as well as to the city.

State planners and policymakers will ask those advocating some form of metropolitan level planning of postsecondary education to justify it. "...[M]etropolitan areas have not generally been viewed as the appropriate unit for developing and coordinating educational resources," even while many of the same observers have been calling upon postsecondary education to mobilize its resources to meet urban problems." (Carnegie, 104)

The Campus and The City gives five basic reasons for some form of postsecondary interorganization on the metropolitan level:

(1) postsecondary schools in a single metropolitan region usually are seeking to attract students from the same pool, more or less;

(2) most of these schools interact with the same political structures;

(3) most of them also have parallel or common linkages° with the same socio-economic structures;

(4) they also have a system of relations among them which is peculiar

to the city or region, distinct from their linkages° with "foreign" institutions of post-secondary education;

(5) most of them must deal with the same population patterns and enrollment trends:

(a) excess capacity in some schools along with overenrollment in others,
(b) population growth in the suburbs and decline in the central cities,
(c) the changing character of central city populations, whom some institutions may not even be able to cope with, much less serve.

In the absence of city-wide coordination of postsecondary education, then, the location pattern of postsecondary schools in a city may not be appropriate to the distribution of its population. Such coordination can also help bring about a "rational" (in terms of city or postsecondary political programs) division of labor among the schools, "to avoid unnecessary duplication and/or to protect particular markets for certain institutions." (Carnegie, 106) Also the current decline in public and private support for postsecondary education provides a stimulus for sharing facilities. An interorganization which thus pushes postsecondary education in a city towards a more "rational" division of labor and use of facilities may actually increase the outputs of postsecondary education (in terms of units of value to the city and to the institutions themselves), particularly by organizing those "educational or service programs beyond the scope of the individual cooperating colleges." (Carnegie, 106)

B. Multicampus Systems

We have already referred to Lee and Bowen's study of The Multicampus University. In this section we will report a few of their findings which indicate the opportunities and problems they create for planning post-secondary education for a city or metropolitan region.

Some multicampus universities "are a direct organizational response of the university to the 'urban crisis'." (Lee and Bowen, 18) The general picture of the impact of these systems on the IPEC can be summed up thus:

> With respect to the latter, inner-city community relations programs of one urban campus, although easily characterized as high-risk ventures, have been accepted by central staff located at rural campus. No instances were reported of an urban campus being inhibited in its responses to the urban crisis by multicampus administrative or faculty structures. Emulation of the research orientation of the major campus--the single most popular hallmark of quality--remains an internal inhibition, however.
>
> "Despite these examples, the multicampus systems do not yet appear to have related the peculiar advantages of their structure resources of several campuses are greater than the resources of one alone, marshaling these scattered resources and aiming them effectively at the blight, pollution, and dissolution of the cities on a university-wide basis presents an unsolved problem. For example, one system announced that substantial funds would be available for "urban problems" and solicited proposals from the faculty to be considered on their merits. However, ultimate allocation among the campuses was in almost direct proportion to enrollment, in order to keep peace in the family. Moreover, systemwide reordering of individual campus priorities in the interest of overall program balance was regarded as undue interference with local autonomy. (Lee and Bowen, 84-85)

Further considerations raised by multicampus systems concern the problems they have created for extension divisions and for attempts at planning at the sub-state level. Extension programs in multicampus universities have faced two basic problems: their low priority and administrative uncertainties. The low priority of extension can be traced to its lack of prestige in the academic community and the lack of public support. These problems are shared by extension in other forms of university organization, but the administrative problems are peculiar to the multicampus university. They arise when the administration of extension is decentralized, i.e., exercised by the component campuses. Decentralization leads to the question: should jurisdiction over extension be territorial or programmatic? It also exacerbates and is hampered by

lack of agreement on administrative procedures among campuses and between the campuses and the central administration. Lee and Bowen argue that the problems of extension will be resolved only when the broader policy questions concerning the applicability of land-grant activities to an urban society are answered. (Lee and Bowen, 99) Our previous review of the literature found the land-grant model to be inappropriate to the IPEC and leads to the suggestion that perhaps Lee and Bowen are using the wrong approach. (Daly, 95) The resolution of the problems of extension more likely depends on the institutionalization of multi-level planning of postsecondary education on statewide, metropolitan, and regional levels. Aside from the uncertain state of systemwide planning in the multicampus university, there exists the unresolved issue of the role of regional or metropolitan planning of postsecondary education, when some of the institutions in a city or region belong to a multicampus system. Lee and Bowen found "examples of generally informal regional coalitions for specific purposes ..., but these rarely involve more than one campus in the system and appear to have little or no impact on multicampus governance." (Lee and Bowen, 100) They did observe some signs that such planning could have an impact. This might offer some hope to the authors of the report of College Center of the Finger Lakes who recommended that "the CCFL should demonstrate publicly that voluntary planning can be achieved on a regional basis by submitting periodic institutional plans as a consortium to the state." (CCFL, 84)

C. A Metropolitan Higher Education Council

The Carnegie Commission recommends two different interorganizations for the IPEC: a metropolitan higher education council (MHEC) and a metropolitan educational opportunity counseling center (MEOCC). An

existing consortium, such as the Academic Urban Affairs Consortium in Winston-Salem, might possibly serve as the "nucleus" for a "metropolitan higher education council [which] would be primarily a planning and coordinating body among institutions, between institutions, and industry, and between institutions and various types of service agencies." (Carnegie, 109) The MHEC would have the following functions:

(1) "primary market-research agency for educational needs in the metropolitan area,:

(2) "central focus for planning for higher education in that area,"

(a) cooperating with state agencies for "needs" assessment and and educational planning,

(b) "evaluation and implementation of recommendations for higher education in the area,"

(3) creation and maintenance of linkages between education and industry in the city,

(a) work-study programs for employees,

(b) on-the-job late afternoon classes,

(c) assist industry to assess educational requirements for various jobs and to construct valid hiring criteria,

(4) development of linkages between public school system and post-secondary institutions, including

(a) teacher training,

(b) early admissions and advance placement,

(c) placement of student teachers,

(5) coordination of student service projects (Carnegie, 109-110)

The metropolitan educational opportunity counseling center "would be designed to encourage more effective use of the educational resources in the area by the educational consumer." (Carnegie, 111) Its functions

would be

(1) to be an "educational and vocational adviser to the citizens in the metropolitan area," serving all ages, without regard to previous education,

(2) to advise the MHEC on facilities requirements and shifts in demand for postsecondary education.

> The opportunity centers and metropolitan councils are neither designed nor intended to be higher education institutions and they should not be considered a part of city or metropolitan governments. They are independent civic agencies seeking cooperation among and providing services to colleges and universities in the area and acting as educational facilitators for residents in the area. (Carnegie, 112-113)

The MEOCC will probably require a larger staff since counselling is more labor-intensive than planning/coordination, at least with our existing social technologies. Neither the MHEC nor the MEOCC should be a state agency, but a representative of the state board should sit on each of their boards. (In North Carolina this would mean representatives from the Board of Governors of the University of North Carolina and the N.C. State Board of Education, which controls the community college system, or a representative from the "1202" agency if one is ever established and if it is separate from either of the other two boards.) The executive director of the MHEC should sit on the board of the MEOCC, and vice versa. The mayor should assign someone on her-his staff to act as liaison with postsecondary education. The Commission recommends that the two IPEC interorganizations receive one-half their funds from local sources and one-half from state and federal funds.

The Carnegie Commission does not go into any details about how either a metropolitan council or an opportunity center would function. In addition, The Campus and the City treats the MHEC as if it were a univo-

cal concept. The fact of the matter is that if metropolitan councils were to be created in a number of cities across the country, one would probably find that they would take on a wide variety of forms, functions, and processes. Theoretically, at least, their "modes of coordination" could range across four of the cells in Seipps's table: cooperation, exchange, negotiation, or arbitration. One would also like to know what sort of intermediate interorganizations would help in moving from existing cooperative arrangements in a city to an institutionalized metropolitan council.

In this report we have attempted to outline the elements of a strategy for choosing and institutionalizing different approaches to the interface between postsecondary education and the city. Such institution building can take place (1) within individual postsecondary schools, (2) among just the postsecondary schools, (3) between individual schools and other urban institutions, or (4) among a number of schools and a number of urban institutions. Any of these four options may be considered adequate in themselves or as stages on the road to institutionalizing one of the others. Likewise, the institution builder may be faced with an initial situation where the interface exists in any one or any combination of these categories. The Carnegie Commission's recommendation of metropolitan higher education councils has great appeal as an institutional response to the question of the role of postsecondary education in a city. It may not be immediately approporiate in most cities. On the other hand, it may be a vehicle for working backwards and institutionalizing the IPEC at the lower levels. These, and a host of other questions, must be confronted by those in postsecondary education who want to change their institutions so that the structure and processes will more consciously reflect the linkages which

do exist between postsecondary institutions and the city. These linkages can then be used consciously to move both postsecondary education and the city in a desired direction.

D. Available Planning Tools for A MHEC

In order to give the reader some concrete notion of how a metropolitan council might carry out its functions, we will now discuss some of the planning techniques analyzed by Karl Fox and his colleagues for educational planning. These techniques would be most appropoiate for a MHEC whose mode of coordination is arbitration, but they could also be applied to situations of cooperation, exchange, or negotiation. They are based on the assumption that the interorganization is a "non-market" system, i.e,, its mode of coordination is neither "competition", nor "conflict". At the same time, they require a higher level of consciousness than exists in either indifference or induction-adduction.

These techniques have been developed by planners who have been trying to use mathematical programming to allocate resources in an interorganization. Because an interorganization, by definition, has more than one level (at least a center and a number of units) these interorganizational methods for allocating resources are often called "decomposition" or "decentralization" techniques. All such methods have three things in common:

(1) decentralization, allowing the units "complete freedom of choice in their optimization problems, except that the center provides coordination through guiding rules of price imputation based on the marginal productivities of common, central resources allocated to different sectors;"

(2) "the formulation of guiding rules of price adjustment ... such that in successive applications or iterations they specify a feasible and

sequentially improving optimizing direction converging to the overall optimums;"

(3) the use of competition for resources to reflect the linkages among the units of the interorganization." (Sengupta, 192-193)

There are three stages in the application of decompositional planning to an interorganization: construction of the interorganizational (central) programming model, construction of the set of sectoral submodels, and choice of an aggregation rule to link the two. The bulk of the book by Fox et al. is taken up by technical discussions of the appropriate analytic techniques which have been developed for carrying out each step in decentralized planning of an interorganization. Their experience in applying decomposition to university planning provides important information about the theoretical and practical implications which will arise in the use of these techniques by a MHEC. The Appendices attached to this report are intended to give the reader an idea of the state of art of constructing planning models for the IPEC. Excerpts from the attempts at WICHE to begin the construction to inventory postsecondary outputs and programs are included as Appendices 2 and 3 of this report. Procedures for self-study with respect to urban involvement have been developed by the American Council on Education and during the Cincinnati study. Excerpts from their reports are included as Appendices 4 and 5. The American Council on Education also sponsored the development of a method for measuring the economic impact of an institution on its locality. Highlights of this model are included as Appendix 6, and an example of the application of this method to Winston-Salem, N.C., as Appendix 7. In addition, the "Methodological Appendix" to "The Impact of the University of Pittsburgh on the Local Economy," done for the University-Urban Interface Program by the Educational

Systems Research Group, contains some valuable practical discussions for those considering undertaking such a study. Julian M. Laub's The College and Community Development: A Socioeconomic Analysis for Urban and Regional Growth also sets out a method for analyzing even more of the aspects of the local political-economy of postsecondary education, than are included in the cash-flow models of the ACE Caffrey-Isaacs approach.

An institution builder will be particularly concerned about the institutional requirements for using decompositional planning methods. Like most writers in the Tinbergen school, Fox and his fellow authors tend to neglect these, but they do provide some important information for those considering the formation of a metropolitan council to plan postsecondary education. In order to function well, decomposition-type methods require an institutional environment which has been described by Hurwicz as "informationally decentralized." In IB terms the interorganizational code° must have two qualities:

(1) it provides for an operational rule for the processes of adjusting "(through price or output charges)" the programs°;

(2) it allows for this rule to be applied anonymously "so far as information flows are concerned." (Kumar, 143) In general, decomposition techniques assume "that the levels of decisionmaking are clear-cut, distinct, and identified ..." (Sanyal, 231) The institution builder will want to examine not only the degree to which such distinctiveness presently exists, but also its desirability. "A decision on the most useful type and quality of information and its decentralization should precede any decomposition-type accounting procedure. This again requires institutional and organizational changes of a certain type which should not be taken for granted." (Kumar, 145)

Kumar lists three kinds of fundamental problems which must be confronted by those who would institutionalize decomposition-type planning:

(1) computational: the comparison of the relative costs of alternative decomposition techniques, the economic evaluation of the use of gaming techniques to solve resource allocations for coalitions of any order (of particular importance if the IPEC interorganization falls into the cooperation, negotiation, or exchange categories);

(2) practical: dealing with costs shared in the production of two distinct outputs, with fixed or indivisible resources, with biased responses from the sectors, and with the "optimum degree of divisions into which the [interorganization] has to be decomposed;"

(3) theoretical: the need for an economic analysis of alternative decomposition methods. (Kumar, 146-147)

Finally, the reader may have been struck by the irony of a report which calls for an institutional approach to the interface between postsecondary education and the city, criticizes those who take a narrow, technical approach, and then concludes by recommending highly sophisticated mathematical programming techniques for an organization which doesn't exist. An institutional approach, however, does not preclude the use of quantitative methods. The problem with those who take a narrow view is that they don't see that these techniques require certain organizational and institutional structures which have to be created. The same point applies to the Carnegie Commission's metropolitan councils. They are possible end-points for an institution building process in the interface between postsecondary education and the city, and nothing more. The preceding discussion of decentralized planning procedures which might be employed by a metropolitan council simply lays out what might be,

given our present knowledge. The process of institutionalizing either the procedure (within existing postsecondary institutions) or the councils will change both the underlying situation and our conceptual apparatus for coding it, thus creating even more possibilities.

REFERENCES

Anthony, Robert N. Planning and Control Systems: A Framework for Analysis. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1965.

The Carnegie Commission on Higher Education. The Campus and the City. New York: McGraw-Hill, 1972.

Carroll, Robert L., Hayden B. May, and Samuel V. Noe, Jr. University-Community Tension and Urban Campus Form. Volume 1. Cincinnati: University of Cincinnati, 1972.

Casasco, Juan A. Planning Techniques for University Management. Washington, D.C.: American Council on Education, 1970.

CCFL. Patterns for Voluntary Cooperation. Self-Study Report of the College Center of the Finger Lakes. Corning, N.Y.: CCFL, 1972.

Daly, Kenneth. Institutions of Higher Education and Urban Problems: A Bibliography and Review for Planners. Monticello, Ill.: Council of Planning Librarians, 1973.

Eaton, Joseph W., ed. Institution Building and Development: From Concepts to Application. Beverly Hills, Cal.: Sage Publications, 1972.

Esman, Milton J. "The Elements of Institution Building," see Eaton, pp. 19-40.

Fairweather, George W. Methods for Experimental Social Innovation. New York: John Wiley & Sons, 1967.

Fox, Karl A. Economic Analysis for Educational Planning: Resource Allocation in Nonmarket Systems.

Gross, Edward and Paul V. Grambsch. University Goals and Academic Power. Washington, D.C.: American Council on Education, 1968.

Hayward, Beresford. "The Implemented Educational Plan: an Approach to a Critique of Current Educational Planning," in Educational Planning, Don Adams, ed. Syracuse: Syracuse University Press, 1964.

Hegel, G. W. F. The Phenomenology of Mind. New York: Harper Torchbook, 1967.

Katz, Saul M. "The Institution Building Model: A Systems View," see Eaton, pp. 151-162.

Kornai, Janos. Anti-Equilibrium. New York: American Elsevier Publishing Co., Inc., 1971.

Kumar, T. Krishna. "Resource Allocation Processes in Linear Static Models," see Fox, pp. 80-116.

_____. "Resource Allocation Processes in Nonlinear and Dynamic Models," see Fox, pp. 117-147.

Landau, Martin. "Linkage, Coding, and Intermediacy: A Strategy for Institution Building," see Eaton, pp. 89-110.

Laub, Julian M. The College and Community Development: A Socioeconomic Analysis for Urban and Regional Growth. New York: Praeger, 1972.

Lee, Eugene C. and Frank M. Bowen. The Multicampus University. New York; McGraw-Hill Book Co., 1971.

Malinvaud, E. "Decentralized Procedures for Planning," in Activity Analysis in the Theory of Growth and Planning, E. Malinvaud and M. O. Bacharach, eds. New York: St. Martin's Press, 1967.

Moore, Wilbert E. Man, Time, and Society. New York: Wiley, 1963.

Myrdal, Gunnar. Asian Drama. New York: Pantheon, 1968.

Nash, George. "The Dimensions and Dilemnas of University Involvement in Urban Affairs." Paper delivered to the American Educational Research Association Meeting in Chicago, Ill. Mimeo, n.d.

_____. "Miscellaneous Comments on Community Involvement by Institutions of Higher Education." Mimeo, n.d.

Nehnevajsa, Jiri. "Methodological Issues in Institution Building Research," see Eaton, pp. 65-88.

Sanyal, Bikas C. "The Systems Approach to Resource Allocation in Educational Planning," see Fox, pp. 224-257.

Seipp, Conrad. "Comparative Analysis of Interorganizational Process in Community Health Planning. A Statement of the Design of a Research Project." Chapel Hill, N.C., n.d. (unpaged)

Sengupta, Jati K. "Quantitative Analysis of Nonmarket Systems," see Fox, pp. 19-35.

_____. "Economic Problems of Resource Allocation in Nonmarket Systems," see Fox, pp. 148-223.

_____. "Quantitative Models for Planning for Educational Systems," see Fox, pp. 36-73.

Shoemaker, William A. Systems Models and Programs for Higher Education. Washington, D.C.: Academy for Educational Development, 1973.

Siffin, William J. "Institution Building as Vision and Venture: A Critique," see Eaton, pp. 41-64.

University-Urban Interface Program/Educational Systems Research Group. "The Impact of the University of Pittsburgh on the Local Economy: Methodological Appendix." Pittsburgh: Office of the Secretary, University of Pittsburgh, 1971.

Uphoff, Norman T. and Warren F. Ilchman. "The Time Dimension in Institution Building," see Eaton, pp. 111-136.

Weathersby, George B. and Milton C. Weinstein. "A Structural Comparison of Analytical Models for University Planning," Ford Foundation Program for Research in University Administration, Paper P-12. Berkeley: Ford Foundation Office, 1970.

APPENDIX 1. Glossary of Institution Building (IB) Terms.

In this Appendix we will describe the basic concepts used by the institution building school. These concepts are taken from the book, Institution Building and Development, edited by Joseph W. Eaton.

Code. Coding.

Martin Landau notes that the exchanges which take place at linkage points cannot occur "unless they are properly coded." The elements which are transferred through linkages

> ...constitute messages which are presented in terms of sets of signs which are not necessarily ... transformed into sets of signs that capture the informational content of the message. A sign here is to be understood as a construct or event by means of which one entity affects the behavior of another. Encoding ... constitutes the process of making a set of signs intelligible. A code, thus, is a set of rules which provides the means by which this is done. At the linkage point (assuming effective coupling) these codes mesh...It is on this basis that an exchange can be effected, as in the case of a seller and buyer. ...Whether in serial form or not, inputs and outputs must always be coded if they are not to lose their character. When pairing is congruent, the output of one member of the system becomes the input of another, and so on. When not paired, outputs may be ignored altogether...; or they may so overload a receiving member as to cause considerable strain or dislocation to the point of imbalance or disruption. (Landau, 94-95) (emphasis added)

The task of the institution builder, then, is to set out to distribute the distinguishing properties of the institution in the environment, to educate, to lay the basis of pairing codes, and thus reduce uncertainty. There must be some correlation of means and ends, of instrumental and substantive purposes, for there to be communication and for the system to be relatively ordered at the linkage nodes. Persistent impairment leads to a progressively more stochastic, i.e., disorderly, system. "Common conscience" models of social action push this notion to the conclusion that there must be agreement on means and ends. This conclusion is not inherent in the concept of coding, though Landau himself seems to operate on an

implicit "common conscience" mc el.

Doctrine.

As indicated in the definition of leadership, one of its functions is to formulate the doctrine of an organization. This institutional variable involves "the specification of values, objectives, and operational methods underlying social action ... a series of themes which project, both within the organization itself and in its external environment, a set of images and expectations of institutional goals and styles of action." (Esman, 22) This process requires the investment of time, thought, and effort on the part of leadership; its neglect may lead to loss of credibility and organizational drift. Doctrine has four components: (1) operational objectives; (2) social goals; (3) operational methods (including the actual program of the organization); and (4) "value related justifications of the institution". The thematic aspect of doctrine can be expressed through "readily understandable slogans" which translate parts of the doctrine and "institutional symbols" for the whole effort or the most understandable parts of it. (Nehnevajsa, 81)

> Doctrine states both the values of organizational outputs and the productivity of different combinations of inputs. Such productivity, of course, can only be judged with reference to the values assigned to outputs, but these values are associated with doctrine, a term more neutral than ideology but otherwise much the same. (Uphoff and Ilchman, 119)

While it is important to avoid overemphasis on goal-specification as a function of doctrine, "...if organizational objectives can be specified and projected over time, with the relative importance of different time horizons weighted, then the most appropriate and productive means can be more aptly chosen." (Uphoff and Ilchman, 120)

Institutionality.

An institution builder faces a number of alternative futures to an IB effort. The organization might survive as an additional unit or sub-unit but with its innovative objectives having been abandoned. At the other extreme, the organization might have been destroyed in the process, but its innovations have been adopted by other institutional structures. The desired and end-state of the IB model, however, is the survival of the organization as an innovating unit. This normative end-state has been termed "institutionality," and can be used as an evaluative criterion. "The concept of institutionality denotes that 'at least certain relationships and action patterns incorporated in the organization are normative both within the organization and for other social units, and that some support and complementarity in the environment have been attained.'" (Esman, 24) Institutionality can be broken down into five components:

(1) technical capacity to deliver innovative services with increasing competence,

(2) normative commitments of the organization's personnel to its innovations,

(3) innovative thrust, or the continuing adaptability of the organization to a changing environment, especially its ability to learn and to carry out what it learns,

(4) environmental image, or the value attributed to the organization by the larger social system, which can be measured by

(a) the price of acquiring resources in terms of the IB objectives,

(b) its ability to operate in unconventional ways,

(c) its capacity to defend itself,

(d) how easily it can widen its field of action,

(5) spread effect of its innovations on the way other organizations carry out their business. (Esman, 36)

Jiri Nehnevajsa collapses these components into three tests of institutionality:

"(1) An organization's ability to survive.

"(2) Extent to which an innovative organization comes to be viewed by its environment to have intrinsic value, to be messured operationally by such indices as its degree of autonomy and its influence on other institutions.

"(3) The extent to which an innovative pattern in the new organization becomes normative for other social units in the larger social system." (Nehnevajsa, 141)

Institutionality is a reciprocal process so that any evaluation of institution building must use instruments sensitive to the accommodations that both the institution and its environment make, searching for the particular parts of the institution and the environment which make the adjustments, for how these adjustments are made, and for the particular issues at stake which cause adjustments to be made.

Internal Structure.

"The structure and processes established for the operation of the institution and its maintenance ... (including) ... formal and informal patterns of authority, division of labor among components, channels of communication among them, and the methods of mediating and resolving the disputes ..." are encompassed under the IB variable, internal structure. (Esman, 23) A number of descriptive variables reveal the internal structure of an organization. They include degree of autonomy of parts, hierarchy, degree of centralization of decision-making, types of internal division (administrative, functional), lines of command, and lines of control. (Nehnevajsa, 82) The basic conceptual apparatus for understanding internal structure in this report is that of unit stratification. (Section I.C.)

Leadership.

Perhaps the key variable in any institution building project is leadership: "the group of persons who are actively engaged in the formulation of the doctrine and program of the institution and who direct its operations and relationships with the environment." (Esman, 22) The leadership group contains both formal role incumbents and other influence-wielders among whom "various roles such as representation, decision-making, and operational control can be distributed in a variety of patterns." On the basis of the definition above, one can distinguish two kinds of leaders: initiators (formulate doctrine and program) and executors (direct operations). (Nehnevajsa, 81) The success of a leadership group depends to great extent on its "facu[illegible]y for strategy, which is the planned use of resources over time." (Uphoff and Ilchman, 118) Since institution building is carried out in a situation of scarcity ("an insufficiency of resources at a particular time"), an important function of the leadership is to establish priorities ("the means for scheduling resource uses over time"). "The importance of leadership is related inversely to the availability of resources. The more plentiful they are, the less important is leadership for achieving a given goal. A corollary is that with a given amount of resources, the more quickly a goal is to be achieved, the more important is the contribution of leadership in formulating productive strategies." (Uphoff and Ilchman, 119)

Linkages.

The points at which an institution and its environment exchange resources are termed linkages. Given the assumption that the environment is not an undifferentiated mass but "a set of discrete structures with which the subject institution must interact," then it follows that "the institution must maintain a network of exchange relationships with a limited

number of organizations and engage in transactions for the purpose of gaining support, overcoming resistance, exchanging resources, structuring the environment, and transferring norms and values." (Esman, 23) There are four kinds of linkages.

(1) Functional linkages arise "with those organizations performing functions and services which use the outputs of the institution," including real and potential competitors. (Esman, 23) All functional linkages are not equally important to the organization. The importance of a functional linkage is indicated by its "centrality", which is measured by the magnitude of the effect

(a) of degraded inputs--with respect to quantity, reliability, validity, and timing;

(b) of loss of inputs from a legitimately expected source;

(c) of providing degraded outputs to another institution which legitimately expects non-degraded ones (Nehnevajsa, 83)

(2) Enabling linkages occur with "organizations and social groups which control the allocation of authority and resources needed by the institution to function." (Esman, 23) In social systems theory the activities associated with enabling linkages are usually called boundary maintenance, which deals with such issues as whether the institution will be started and/or maintained, the type, timing, and delivery mode of resources. (Nehnevajsa, 82) Another way of describing enabling linkages is that they have to do with what Saul M. Katz calls "substantive purpose," which "concerns the organization's anticipated contributions to developmental objectives--that is, its contributions of outputs and innovations to the society." "Instrumental purposes," on the other hand, "... usually relate to the survival, growth, and change of the organizations. The instrumental purpose

identified in the institution building model is that of institutionality." (Katz, 155)

(3) Normative linkages involve the organization "with institutions which incorporate norms and values (positive or negative) which are relevant to the doctrine and program of the institution." (Esman, 23) Part of the problem of institutionalization concerns "ideological and ethical constraints...major social values ... which are usually institutionalized in some other domain of social life ... Therefore, the central issues have to do with compatibility of institutional values with custom, mores, and law." (Nehnevajsa, 83) The institution builder must be sensitive to which values are institutionalized, how and where they are institutionalized.

(4) Diffused linkages take place "with elements in the society which cannot clearly be identified by membership in formal organization." (Esman, 24) With regard to these linkages the institution builder must try to identify sources of opposition/support, the reasons for opposition or support, the effectiveness (over time) and estimated activities of these sources. (Nehnevajsa, 83)

Siffin, Uphoff and Ilchman criticize the notion of linkages in the IB model as conceptually rather empty. Uphoff and Ilchman state that the content of this variable can be better expressed by analyzing the transactions variable. (Uphoff and Ilchman, 133 fn. 16) Landau's discussion of coding, however, indicates that the concept of linkages should not be dismissed. The problem lies more in the theoretical void in the IB writers who emphasize linkages.

Program.

Program is "the translation of doctrine into concrete patterns of action and the allocation of energies and other resources within the

institution itself and in relation to the external environment." (Esman, 23) Program should combine innovation, responses to "felt needs," investment in preparing the environment for more changes, and adaptation to feedback. Because program is a continuous, dynamic process, not a one-shot attempt, the first program which provides the initial kick to the system is crucial insofar as it affects the internal and external future states of the institution.

> An organization's program consists of the allocation of resources over time, balanced more or less by its receipt of resources during approximately the same period of time. ...Given the scarcity of resources, a program also represents a statement of priorities or a sequence of resource allocations judged to be most productive for attaining organizational goals. ...Institution building thus is in large part a function of time. The more rapid the results desired, just as the less the organization's outputs are initially valued by others, the more critical is the content and implementation of program. Further, the fewer resources available to an organization's leadership, the more important is their efficient allocation through program strategy." (Uphoff and Ilchman, 120-121)

Since program is so closely implicated with time, it can be analyzed by using the three dimensions of timing: synchronization, sequence, and rate (simultaneity, prescribed order, and frequency).

> The strategy of institution building requires that the program increase the resource position of the organization either by raising the productivity or by making more favorable or extensive its exchanges with other organizations. Timing inputs and exchanges in such a way as to achieve organizational objectives efficaciously is the aim of program. Contributing to societal needs is not in itself sufficient for institutionalization. Leadership needs to know how to satisfy these needs in a <u>timely</u> manner. (Uphoff and Ilchman, 121)

<u>Resources.</u>

Since program deals with the allocation of resources and "structure represents the pattern of internal resource flows" (Uphoff and Ilchman, 122), it is past time for us to discuss <u>resources</u> as an institutional variable.

> Resources may be regarded as inputs that the organization either converts into products or services or into increasing its own capabilities. Resources can be classified as legal and political authority, personnel, funds, equipment, facilities, and information.

(Esman, 30)

Uphoff and Ilchman disagree with Esman's definition which includes money, human skills, and technology, as well as physical goods, actual services, and information. In their view, money represents a claim on resources, but resources are "factors of organizational production"--economic goods and services, information, status, force, authority and legitimacy. There are two currencies representing claims on these organizational resources: money and support.

> Support is worth no more than the resources it can procure from individuals upon demand, their goods or services, their information, status, use of force, or their according of legitimacy. Thus, one of the problems of organizational leadership is the raising and maintenance of support, from members or from sources outside the organization. Another problem is the conversion of support into the desired or required resource at any particular time. (Uphoff and Ilchman, 117)

Since such resources are scarce and can be put to a number of uses, the organization has to pay a price to obtain them. Usually this price is some good or service valued by those who control access to the resource. This value is expressed in terms of one of the organizational currencies.

Ilchman and Uphoff summarize the most important aspects of resources in an interorganizational context, in the table reproduced on the following page. We have changed the original "regime" to "center" and "sector" to "unit".

Substantive purpose. See Linkage.

Transactions.

It is significant that Esman mentions transactions as a variable in his theoretical framework for institution building, but he does not discuss it at length. The only writer in the IB text to attempt a definition is Katz, who describes transactions as the "exchange of goods and services,

POLITICAL RESOURCES AND CENTER-UNIT INTERACTION

Center	Units
Seeks:	Seek:
1. To cope with social and economic change	1. To maximize their well-being, status, and authority
2. To induce social and economic change	2. To increase their productive capacity
3. To stay in authority in the present	3. To achieve their respective ideological goals
4. To stay in authority in the future	
5. To build political and administrative infrastructure	
Has and Offers:	Have and Offer:
1. Goods and services, and money	1. Goods and services, and money
2. Status and prestige	2. Status and prestige
3. Information	3. Information
4. Coercion (or no coercion) and threats	4. Violence (or no violence) and threats
5. Authority and influence	5. Legitimacy, and allegiance and support
Needs or Wants:	Need or Want:
1. Goods and services, and money	1. Goods and services, and money
2. Status and prestige	2. Status and prestige
3. Information	3. Information
4. No violence (or violence against others) and threats	4. No coercion (or coercion against others) and threats
5. Legitimacy, and allegiance and support	5. Authority and influence

and the exchange of power and influence." He distinguishes four kinds of transaction, according to the purpose of the exchange:

(1) to gain support and overcome resistance,

(2) to exchange resources

(3) to achieve "complementarities in the environment,"

(4) to transfer norms and values (Katz, 158)

Uphoff and Ilchman also add an observation on the institutional aspect of transactions which is missing from most economic theory.

> The exchange relationships ... are not simply a matter of quid pro quo bargaining if an institution is involved. In one respect, an institution involves increased dependence on the organization so that action strategies aiming at institutionalization seek to increase over time the dependence of others on outputs of the organization. This may be because it supplies resources previously supplied by others (displacement), because it creates new demands for its outputs, because it gets others to value its output more highly, or because through efficiency or new technologies it can offer its output at a lower price than before.
>
> In another respect, an institution receives greater legitimacy from those with whom it maintains exchange relationships. Possession of legitimacy enables an institution to make claims on others' resources without making as full or tangible compensation as it would if that legitimacy were lacking. (Uphoff and Ilchman, 123)

APPENDIX 2

INVENTORY OF EDUCATIONAL OUTPUTS AND ENVIRONMENTAL VARIABLES

A Training Document Prepared by the National Center for Higher Education Management Systems at WICHE

SECTION I - OUTPUTS OF HIGHER EDUCATION

Vocational and Cognitive Development

General Knowledge

Knowledge in Specialized Fields

Motor Skills

Sensory Skills

Application of Knowledge

Vocational Preparation

Critical Thinking and Reasoning

Creativity

Communication Skills

Reading

Speaking

Composition

Listening

Nonverbal, Nonwritten Expression

Interpersonal Growth

Leadership

Social Development

Cultural Awareness

Student Values and Attitudes

- Political
- Racial
- Social Conscience
- Religious and Spiritual
- Sexual Attitudes
- Achievement Orientation
- Humanism/Altruism
- Self Concept
- Intellectual Disposition
- Change and Innovation
- Conflict Orientation
- Socio-Economic Aspirations

Creation and Propagation of Knowledge

- Reorganization of Knowledge
- New Inventions and Developments (Applied Research)
- New Ideas and Concepts (Basic Research)
- Creative Arts

Community Growth and Development

- Continuous Education
- Social Impact
- Community Services
- Economic Impact
- Community Pride
- Recreational Opportunities
- Cultural Opportunities

SECTION II - INSTITUTIONAL ENVIRONMENT

Academic Environment

- Intellectual Atmosphere
- Curriculum Mix and Depth
- Academic Freedom and Self-Determination
- Innovation
- Academic Aptitude Mix
- Academic Process
- Faculty Background and Experience
- Faculty Availability to Students
- Faculty Teaching Ability
- Faculty Research Ability
- Faculty Values and Attitudes
- Academic Resource Availability

Organizational and Physical Environment

- Physical Environment
- Governance
- Communications and Exchange of Ideas
- Support Programs
- Student Services

Social Environment

- Social Interaction
- Faculty and Student Health
- Socio-Economic Mix
- Racial and Cultural Mix

On-Campus Residence

Student Marital Status

Cultural Opportunities

Recreational Opportunities

Cohesiveness

Economic Environment

Institutional Financial Status

Student Financial Aid

Student Affluence

Student Costs

Output Measurement Methods

Psychometric Tests

Survey Instruments

Questionnaires

Institutional Records

Unobtrusive Measures

LIMITATIONS OF THE INVENTORY

Insufficient Comprehensiveness

Difficulty of Relating Output Measures to Specific Programs

Redundancies and Proxy Relationships

No Implied Value Judgements

Narrowly Conceived Output Measures

Most Easily Measured Variables May Not Be Most Important

SELECTED OUTPUT INDICATORS FOR MICRO-U II

Student Related

1. General Knowledge
2. Knowledge in Special Fields
3. Leadership
4. Social Conscience
5. Self-Concept

Environment Related

1. Curriculum Mix and Depth
2. Innovation
3. Faculty Availability to Students
4. Faculty Teaching Ability
5. Academic Resource Availability

APPENDIX 3

PROGRAM CLASSIFICATION STRUCTURE

Preliminary Edition (Revised)

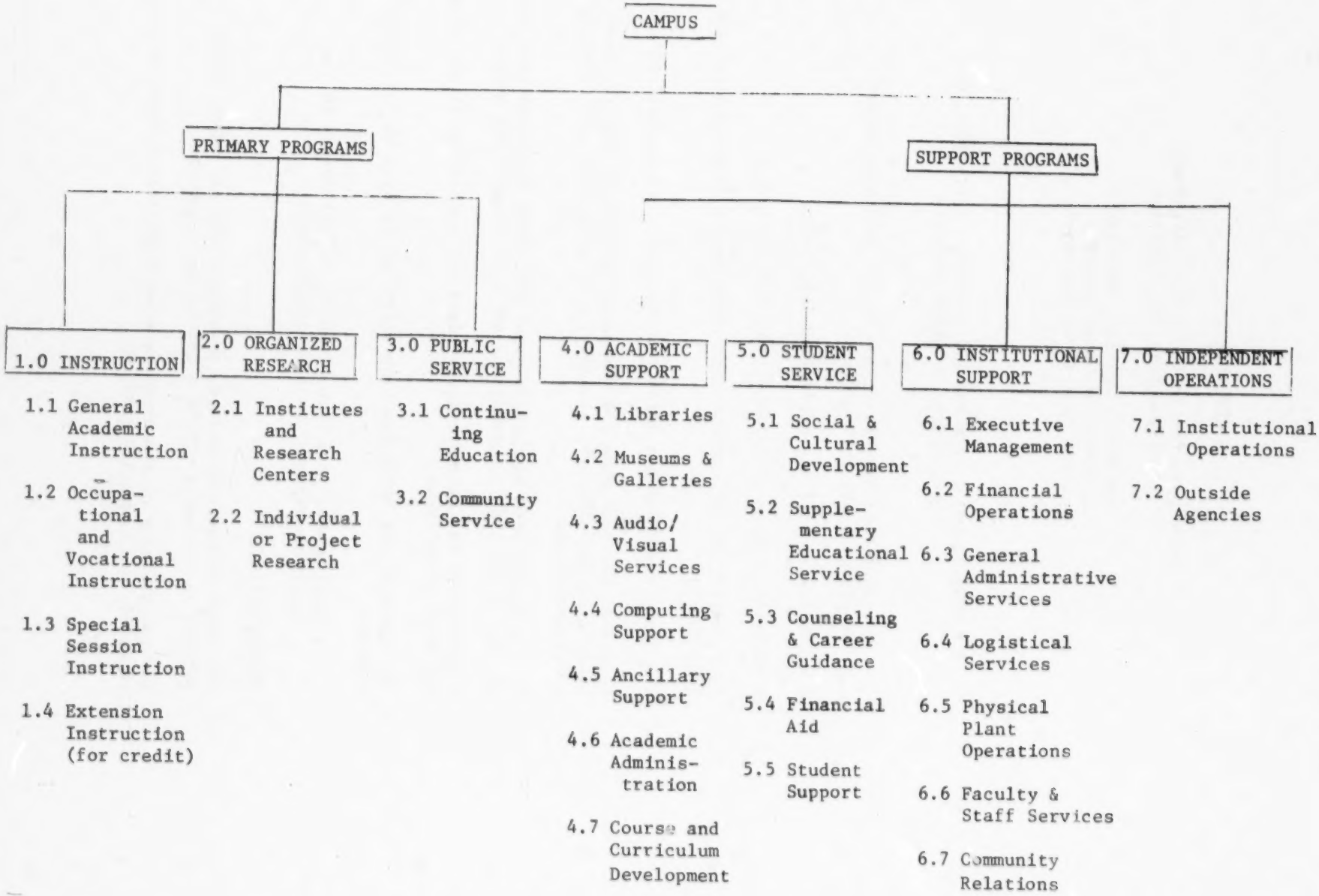
Prepared by

Warren W. Gulko

National Center for Higher Education Management Systems
Western Interstate Commission for Higher Education
P.O. Drawer P Boulder, Colorado 80302

February, 1971

ORGANIZATION OF THE PROGRAM CLASSIFICATION STRUCTURE



APPENDIX 4

Guidelines for Institutional Self-Study
of Involvement in Urban Affairs

Martin D. Jenkins, Director
Office of Urban Affairs
American Council on Education

A SUMMARY CHECK LIST FOR INSTITUTIONAL SELF-STUDY OF INVOLVEMENT IN URBAN AFFAIRS

Consideration has been given to the following aspects of planning the self-study:

[ ] The chief executive has excercised leadership

[ ] A favorable campus climate has been established.

[ ] An inventory of the current urban program has been prepared and distributed.

[ ] The chief executive has initiated the study by a formal call to action.

[ ] Provision has been made for the participation of faculty members, administrative officers, students, city government and community representatives.

[ ] The study has been adequately organized, with provision made for effective leadership, committees and task forces, and budget.

[ ] A reasonable and definite target data for completion of the study has been established.

[ ] The scope of the study has been delimited to keep it in reasonable bounds.

Consideration has been given in the self-study to the following aspects of urban involvement:

Objectives

[ ] The institutional objectives, to assure that the urban affairs program is conducted within a conceptual framework

[ ] The relationship of the urban-related objectives to instruction, research, and community service.

Organization and Administration

[ ] The scope of the urban affairs program, whether an institutionwide thrust or limited to organized centers.

[ ] The roles of all departments and divisions: academic departments, student services, administrative divisions.

[ ] Provision for top-echelon administrative direction and coordination of the program.

[ ] The feasibility and functions of separately organized institutes or centers.

[ ] Provision for the urban poor, blacks, and other minority ethnic groups, including recruitment, admissions, financial aid, counseling, compensatory education, ethnic studies, housing, social relations.

[ ] The identification of institutional practices which reflect racism.

[ ] Provision for blacks and other minority ethnic groups to share in decision making.

[ ] The appointment of blacks and other minority ethnic groups to faculty, administrative, and staff positions.

Curriculum and Instruction

[ ] The need for general education to prepare students for an urban culture.

[ ] The role of each academic department in urban involvement.

[ ] The need for urban-related courses in existing undergraduate and graduate major sequences, such as education, government, home economics.

[ ] The need for new undergraduate and graduate major sequences, such as law enforcement, social welfare, public administration, preparation of paraprofessionals.

[ ] The role of the continuing education or extension program.

[ ] Compensatory, remedial, or developmental experiences.

[ ] The adaptation of instructional procedures, such as community participation, work-study, internships.

[ ] The identification of faculty and staff members with urban expertise.

[ ] The utilization in instruction of individuals in the community who may not meet existing criteria for faculty appointments.

Community Involvement

[ ] The identification of the communities served, by geographical location and by function.

[ ] The nature of current community relations.

[ ] Relationships with agencies and organizations engaged in community activities.

[ ] The scope of community involvement.

[ ] The types of community involvement such as conferences, cultural and athletic programs, satellite centers, student participation, small business services, legal services, health centers.

[ ] Constructive participation by students and student organizations.

[ ] The roles of individual faculty and staff members as consultants and advisers to urban agencies and organizations.

[ ] The utilization of the media--newspapers, television, radio.

The Institution as a Corporation

[ ] The role of the institution as a corporation, including the recruitment and promotion of members of ethnic minorities, off-campus housing of faculty and staff, campus expansion and design, utilization and support of business enterprises of ethnic minorities, utilization of city services.

Research

[ ] The role and scope of urban research.

[ ] The faculty rewards system as related to urban participation and research.

[ ] Provision for interdisciplinary research.

[ ] Cooperation with other colleges and universities and public and private social agencies in research, instruction, and community services.

[ ] Relationships with city and county government executives and agencies; with public and parochial school systems.

[ ] The utilization of institutional research funds.

[ ] The utilization of federal and foundation grants for research.

Facilities

[ ] Facilities, on campus and off campus.

[ ] The upgrading of library and educational media resources.

Costs

[ ] Program costs.

[ ] The identification of aspects of the programs which can be instituted at little cost.

[ ] Financial resources and support: institutional, governmental, and philanthropic.

Other

[ ] Time schedules for implementation.

[ ] Distribution of the report.

APPENDIX 5

UNIVERSITY - COMMUNITY TENSION AND URBAN CAMPUS FORM

Volume 1

Robert L. Carroll
Head, Department of Sociology

Samuel V. Noe, Jr.
Associate Professor of Community Planning

Hayden B. May
Assistant Professor
of Community Planning

UNIVERSITY OF CINCINNATI
October 1972

PROCEDURES FOR SELF-STUDY

1. Data collection (historical)
   a. measures of institutional size
      i. FTE enrollment
      ii. full-time day enrollment
      iii. faculty size--full and part-time
      iv. staff size--full and part-time
      v. number of academic departments and programs (option: also research, administrative and service units)
      vi. land area in acres
      vii. gross square feet of university buildings
      viii. number of students occupying university housing
      ix. number of faculty occupying university housing
      x. number of degrees awarded (by level)
      xi. number of parking places provided by institution

   b. measures of relations with neighboring communities
      i. percent of minority students, faculty, administrators, and staff
      ii. percent of students and employees resident in university district
      iii. percent of students from metropolitan area

   c. measures of community size
      i. SMSA population
      ii. census tract population for university district

2. University-community history, particularly
   a. university growth, change, land acquisition and construction
   b. changes in university administrative policies, funding size and sources, status (public/private), etc.
   c. Planning--by type and scope in university and community
   d. Incidents of university-community conflict.
   e. Incidents of positive interaction
   f. Describe community organization--size,purpose,initial date, membership, service area, leadership, history of interaction with university.
   g. University budgets--compare by years and by area (particularly, security, public realtions, instruction, and general administration).

3. Maps (by years in chosen intervals)
   a. base maps (by year)
   b. distinguishable communities (by year)
   c. physical barriers
   d. land use
   e. university-owned land and buildings
   f. student and faculty residences
   g. public transportation routes
   h. university retail patronage
   i. parking
   j. campus functional zones
   k. edge character of the campus
   l. traffic volumes and street capacities
   m. renewal project, model cities areas, planning districts
   n. traffic accidents
   o. zoning
   p. land values/ft.
   q. land presently vacant and underdeveloped
   r. existing schools and school districts
   s. current "visual image" (using Lynch's techniques)
   t. narcotics arrests
   u. census tract boundaries

4. Computer maps
   a. percent of black population
   b. median family Y
   c. median years of school completed
   d. age structure of population (particularly percent of population ages 20-44)
   e. percent of population married and living with spouse
   f. occupational structure
   g. residential density--total population/residential acreage
   h. overcrowding--percent of dwelling units with 1.01 or more persons per room.
   i. median rent in constant dollars
   j. percent of renter-occupied dwelling units
   k. percent of sound dwelling units

m. violent crimes per acre
n. non-violent crimes per acre

5. Analysis
   a. causal analysis of important events, trends and conflicts
   b. evaluation of decision-making with respect to important events, trends and conflicts
   c. measure effectiveness of information flow from community to university
   d. analysis of changes in university-urban interface over time
   e. comparative analysis with other similar studies (as possible basis for projection)
   f. analysis of critical variables (possible predictors) see map lists)

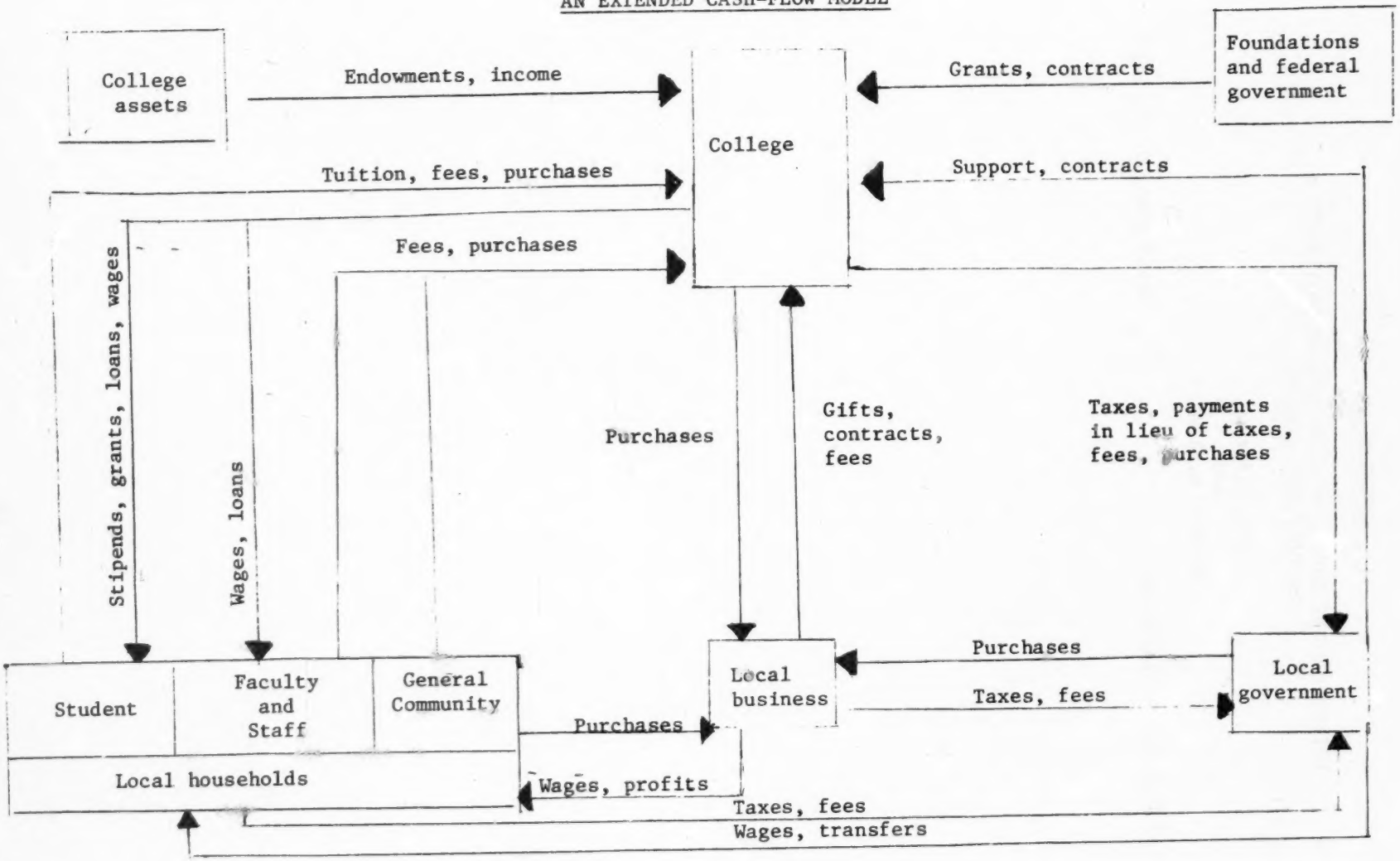
APPENDIX 6

ESTIMATING THE IMPACT OF A COLLEGE OR UNIVERSITY ON THE LOCAL ECONOMY

John Caffrey
and
Herbert H. Isaacs

American Council on Education Washington, D. C., 1971

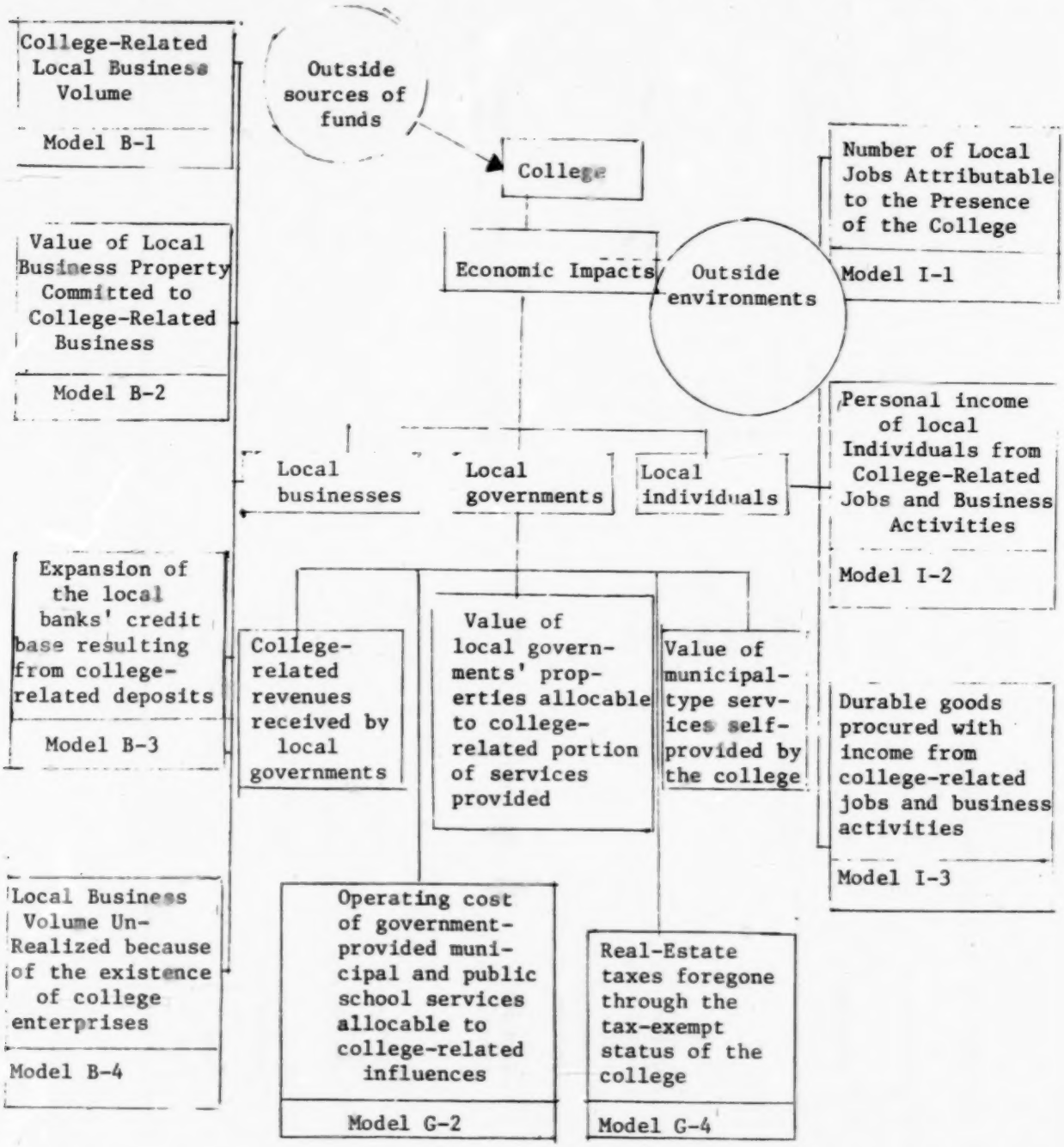
AN EXTENDED CASH-FLOW MODEL



AN EXTENDED CASH-FLOW OR TRANSACTIONS TABLE

From \ To	College	Business	Government	HOUSEHOLDS		
				Student	Faculty staff	General community
College		Purchases	Taxes, in lieu, fees, purchases	Stipends, grants, loans, wages	Wages loans	
Business	Gifts contracts, fees, endowments, income		Taxes, fees	Wages, profits	Wages, profits	Wages, profits
Government	Support, contracts	Purchases		Wages, transfers	Wages, transfers	Wages, transfers
Households:						
Student	Tuition, fees, purchases	Purchases	Taxes, fees			
Faculty, staff	Fees, purchases	Purchases	Taxes fees			
General community	Fees, purchases	Purchases	Taxes fees			

ECONOMIC IMPACTS ON LOCAL BUSINESSES, GOVERNMENTS, AND INDIVIDUALS


College-Related Local Business Volume
Model B-1
Outside sources of funds
College
Number of Local Jobs Attributable to the Presence of the College
Model I-1
Value of Local Business Property Committed to College-Related Business
Model B-2
Economic Impacts
Outside environments
Personal income of local Individuals from College-Related Jobs and Business Activities
Model I-2
Local businesses
Local governments
Local individuals
Expansion of the local banks' credit base resulting from college-related deposits
Model B-3
College-related revenues received by local governments
Value of local governments' properties allocable to college-related portion of services provided
Value of municipal-type services self-provided by the college
Durable goods procured with income from college-related jobs and business activities
Model I-3
Local Business Volume Un-Realized because of the existence of college enterprises
Model B-4
Operating cost of government-provided municipal and public school services allocable to college-related influences
Model G-2
Real-Estate taxes foregone through the tax-exempt status of the college
Model G-4

ECONOMIC IMPACTS ON LOCAL BUSINESSES

B-1. College Related local business volume
  B-1.1. College-related local expenditures
    B-1.1.1. Local expenditures by the college
    B-1.1.2. Local expenditures by faculty and staff
      B-1.1.2.1. Expenditures by faculty and staff for local rental housing
      B-1.1.2.2. Local nonhousing expenditures by local faculty and staff
      B-1.1.2.3. Local expenditures by nonlocal faculty and staff
    B-1.1.3. Local expenditures by students
      B-1.1.3.1. Local miscellaneous expenditures, exclusive of room and board, by students obtaining local room and board in group arrangements or with parents
      B-1.1.3.2. Expenditures by students for local rental housing
      B-1.1.3.3. Local nonhousing expenditures by students who rent housing
      B-1.1.3.4. Local expenditures by nonlocal students
      B-1.1.3.5. Local expenditures by local fraternities, sororities, and other student living groups
    B-1.1.4. Local expenditures by visitors to the college
  B-1.2. Purchases from local sources by local businesses in support of their college-related business volume
  B-1.3. Local business volume stimulated by the expenditure of college-related income by local individuals other than faculty, staff, or students
B-2. Value of local business property committed to college-related business
  B-2.1. Value of local business real property committed to college-related business
  B-2.2. Value of local business inventory committed to college-related business
  B-2.3 Value of local business property, other than real property and inventory, committed to college-related business
B-3. Expansion of the local banks' credit base resulting from local college related deposits
B-4. Local business volume unrealized because of the existence of college enterprises

ECONOMIC IMPACTS ON LOCAL GOVERNMENTS

G-1. College-related revenues received by local governments
- G-1.1. College-related real estate taxes paid to local governments
  - G-1.1.1. Real estate taxes paid to local governments by the college
  - G-1.1.2. Real estate taxes paid to local governments by local faculty and staff
  - G-1.1.3. Real estate taxes paid to local governments by local fraternities, sororities, and other student living groups
  - G-1.1.4. Real estate taxes paid to local governments by local businesses for real property allocable to college-related business
- G-1.2. College-related property taxes, other than real estate, paid to local governments
  - no model Inventory and other nonreal-property taxes paid to local governments by the college (obtain from college records)
  - G-1.2.1. Nonreal property taxes paid to local governments by local faculty and staff
  - G-1.2.2. Nonreal-property taxes paid to local governments by local fraternities, sororities, and other student living groups
  - G-1.2.3. Inventory and other nonreal-property taxes paid to local governments by local businesses for assets allocable to college-related business
- G-1.3 Sales tax revenue received by local governments as a result of college-related local purchases
- G-1.4. State aid to local governments allocable to the presence of the college
  - G-1.4.1. State aid to local public schools allocable to children of college-related families
  - no model Other state aid received by local governments on a per capita, service-unit, or tax-unit basis and influenced by the presence of the college, e.g., gasoline tax allocations, road maintenance subsidies (Establish on the basis of local conditions)
  - G-1.5. Other college-related revenues collected by local governments
- G-2. Operating cost of local government-provided municipal and public school services allocable to college-related influences
  - G-2.1. Operating cost of government-provided municipal services allocable to college-related influences
  - G-2.2. Operating cost of local public schools allocable to college-related persons

G-3. Value of local governments' properties allocable to college-related portion of services provided.

G-4. Real-estate taxes foregone through the tax-exempt status of the college

G-5. Value of municipal-type services self-provided by the college

ECONOMIC IMPACTS ON LOCAL INDIVIDUALS

1-1. Number of Local Jobs Attributable to the Presence of the College
1-2. Personal Income of Local Individuals from College- Related Jobs and Business Activities
1-3. Durable Goods Procured with Income from College-Related Jobs and Business Activities

Model B-1

BV_{CR}

College-Related Local Business Volume

$BV_{CR} = (E_L)_{CR} + (P_{LB})_{CR} + (BV_I)_{CR}$

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

$(P_{LB})_{CR}$ = purchases from local sources by local businesses in support of their college-related business volume (model B-1.2)

$(BV_I)_{CR}$ = local business volume stimulated by the expenditure of college-related income by local individuals other than faculty, staff, or students (model B-1.3)

Model B-1.1

$(E_L)_{CR}$

College-Related Local Expenditures

$(E_L)_{CR} = (E_L)_C = (E_L)_F + (E_L)_S + (E_L)_V$

$(E_L)_C$ = local expenditures by the college (model B-1.1.1)

$(E_L)_F$ = local expenditures by faculty and staff (model B-1.1.2)

$(E_L)_S$ = local expenditures by students (model B-1.1.3)

$(E_L)_V$ = local expenditures by visitors to the college (model B-1.1.4)

Model B-1.1.1

$(E_L)_C$

Local Expenditures by the College[2]

$$(E_L)_C = (e_L)_C \ (E_C - W_{F,S} - XF_C - R_C)$$

$(e_L)_C$ = proportion of total college expenditures that are local, excluding compensation, internal items, and taxes

E_C = total college expenditures

$W_{F,S}$ = gross compensation to faculty, staff, and students

XF_C = internal account transfers and payments

R_C = taxes and other payments to governments

* The study team may wish to immediately exclude from consideration those expenditures known to be nonlocal, for example, payments for outside computer services. If used, this factor may be expressed as E_{NL}. The equation would then read:

$$(E_L) = (e_L)_C \ (E_C - E_{NL} - W_{F,S} - XF_C - R_C).$$

Model P-1.1.2

$(E_L)_F$

Local Expenditures by Faculty and Staff

$$(E_L)_F = (E_H)_F + (E_{NH})_F + (E_L)_{NLF}$$

$(E_H)_F$ = expenditures by faculty and staff for local rental housing (model B-1.1.2.1)

$(E_{NH})_F$ = local nonhousing expenditures by local faculty and staff (model B-1.1.2.2)

$(E_L)_{NLF}$ = local expenditures by nonlocal faculty and staff (model B-1.1.2.3)

TABLE 6

Services not quantified in dollars

(V_B = value of services to local businesses; V_G = value of services to local governments; V_I = value of services to local individuals)

	V_B	V_G	V_I
Educational services			
regular classes for nonstudents	x	x	x
extension courses	x	x	x
seminars	x	x	x
conferences	x	x	x
lectures	x	x	x
workshops	x	x	x
other related activities	x	x	x
Public events			
athletic events	x		x
cultural events	x		x
social events	x		x
Community services			
academic and sociological services provided by students			x
tutoring			x
recreational facilities		x	x
medical and health services		x	x
experimental, primary and secondary schools		x	x
other facilities		x	x
Business and professional services			
research	x	x	x
consultation	x	x	x
publications	x	x	x
library services	x	x	x
other facilities	x	x	x

APPENDIX 7

An Abstract Of

A STUDY OF THE

ECONOMIC IMPACT OF THE

INSTITUTIONS OF HIGHER EDUCATION

ON THE

WINSTON-SALEM COMMUNITY

Prepared by

(MISS) SHELLEY STALL
WAKE FOREST UNIVERSITY

As A Cooperative Venture Between
The Urban Affairs Institute
and
The Greater Winston-Salem Chamber of Commerce

2/72

COMPARISON OF THE TOTAL EXPENDITURES

The following table compares the expenditures from each of the four schools. The appendix of this study is a moredetailed representation of the models and should be consulted for further explanation of each school's model. This table will provide a total survey of all without the confusion that is often generated with detail.

	SALEM	WFU	WSSU	NCSA	TOTALS
SUBMODEL I:					
Students	$ 360,280	$4,535,600	$1,167,900	$280,500	$6,344,280
Faculty	623,000	7,388,200	2,165,000	619,000	10,795,200
College	720,000	10,754,000	2,106,000	333,000	13,913,000
Athletics			280,000		280,000
Food Service			319,700	242,000	561,000
Visitors		563,800	15,000		578,800
TOTAL	$1,703,280	$23,241,600	$6,053,600	$1,474,500	$32,472,980
SUBMODEL II:	284,450	3,880,500	1,011,000	246,000	5,421,950
SUBMODEL III:	1,136,090	15,498,800	4,038,000	983,500	21,656,390
TOTAL EFFECT	$3,123,820	$42,620,90[illegible]	[illegible],102,600	$2,704,000	59,551,320

Submodel I is the college-related expenditures, Submodel II is the multiplier effect that produces additional business volume, and Submodel III is the multiplier effect of the recycling of income.

APPENDIX

SALEM COLLEGE

The actual calculations for each school follow. The first model, that of Salem College, is more detailed than the others, for the sake of explanation. The others are condensed for the sake of brevity, but should be recognized as accurate, since similar methods were used to derive their tabulations.

In computing the first submodel for Salem, it is necessary to note that only student, faculty, and college expenditures are considered. Since there is no athletic program, this category is deleted, as are the expenditures by visitors, since this information is not available. The college provides its own food service; therefore, there is no college-related expense for a catering service.

The sum of all three submodels of Salem is $3,123,820.

SUBMODEL I: The aggregate amount of all college-related expenditures.

A.	Students		
	1. On-campus--458 (students) x $60 (monthly estimate) x9 (months)	$247,320	
	2. Off-campus (with parents)--35 x $40 x 9	12,600	
	3. Married--31 x $3650 x 88.7% (portion of income spent within the county)	100,360	
	TOTAL		$360,280
B.	Faculty and staff		
	1. Rental expenditures	115,000	
	2. Nonhousing expenditures	508,000	
	TOTAL		$623,000
C.	College as a corporation		720,000
	TOTAL COLLEGE-RELATED EXPENDITURES		$1,703,280

SUBMODEL II: Multiplier effect--generating additional business volume
The percentage is obtained from the Caffrey-Isaacs publication.

16.7% x $1,703,280 $284,450

SUBMODEL III: Multiplier effect -- recycling of income

66.7% x $1,703,280	$1,136,090
TOTAL EXPENDITURES EFFECT FOR SALEM COLLEGE	3,123,820

WAKE FOREST UNIVERSITY

Since the figures for Wake Forest University--related expenditures had already been tabulated in a similar manner, they are taken directly from Mr. Allen's study. The student expenditures category in this case also includes the cost of the food service. He obtained his estimates from a former study done in the fall of 1970 by James Daley, a student at Wake Forest, A Comparison of the Costs of Living for On-Campus and Off-Campus Students at Wake Forest University. Mr. Daley computed that the average Wake Forest student living on-campus spends $154 a month while the average student living off-campus spends $145 a month. Mr. Allen deducted the monthly dorm rent from the on-campus figure to obtain the amount of total student expenditures. The figures follow directly from his study.

The figure obtained for visitors includes the results of a study done for the athletic department by Don Phillips, The Economic Impact of Wake Forest University Football: 1968.

SUBMODEL II: College-related expenditures.

A.	Students	$4,535,600
B.	Faculty	7,388,200
C.	University as a corporation	10,754,000
D.	Visitors	563,800
	TOTAL COLLEGE RELATED EXPENDITURES	$23,241,600
SUBMODEL II: Multiplier effect--generating additional business volume.		3,880,500
SUBMODEL III: Multiplier effect: recycling of income.		15,498,800
TOTAL EXPENDITURES EFFECT FOR WAKE FOREST UNIVERSITY		$42,620,900

WINSTON-SALEM STATE UNIVERSITY

The following figures are taken directly from the study of the Winston-Salem State impact on the community. Since Dr. Blount followed a similar model, it is unnecessary to go into detail and explanation here.

SUBMODEL I: College-related expenditures.

A.	Students	$1,167,900
B.	Faculty	2,165,000
C.	University as a corporation	2,106,000
D.	Athletics	280,000
E.	Food service	319,700
F.	Campus visitors	15,000
	TOTAL COLLEGE-RELATED EXPENDITURES	$6,053,600

SUBMODEL II: Multiplier effect--generating additional business volume. 1,011,000

SUBMODEL III: Multiplier effect--recycling of income. 4,038,000

TOTAL EXPENDITURES EFFECT FOR WINSTON-SALEM STATE $11,102,600

NORTH CAROLINA SCHOOL OF THE ARTS

Since there are no definite figures available on expenditures by visitors to the School of the Arts, the effect cannot be included in the model for that school. Actually, the school brings in a lot of visitors for several reasons, the first of which is the productions at the school. A unique factor that brings a lot of visitors is the requirement that each prospective student have an audition before admittance. Finally, the uniqueness of the school is an interesting aspect that attracts many to the area to observe and study its operation. However, since there are no dollar amounts associated with these effects, it is necessary to omit them from the computations.

The model of the North Carolina School of the Arts includes, besides the actual expenditures by the faculty, students, and institution, the expenditures to its outside food service.

SUBMODEL I; College-related expenditures

A. Students	$280,500	
B. Faculty	619,000	
C. College as a corporation	333,000	
D. Food service	242,000	
TOTAL COLLEGE-RELATED EXPENDITURES		$1,474,500
SUBMODEL II: Multiplier effect--generating additional business volume.		246,000
SUBMODEL III. Multiplier effect--recycling of income		983,500
TOTAL EXPENDITURES FOR NOTH CAROLINA SCHOOL OF THE ARTS		$2,704,000